PLATO AND PARMENIDES

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PLATO AND PARMENIDES

Parmenides' *Way of Truth* and Plato's
Parmenides translated with an Introduction
and a running Commentary

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PREFACE

ABOUT the significance of the second and longer part of Plato's *Parmenides* scholars, both in ancient and modern times, have differed more widely than about any other of his dialogues. Proclus in his Commentary recognised two main schools of interpretation: the logical and the metaphysical.[1] Both still have their representatives to-day.

The logical view appears to have prevailed in the Middle Academy. Albinus [2] in his *Introduction* classes the *Parmenides* with the *Protagoras* (only) as concerned with the refutation of falsehood (ἐλεγκτικός). In his *Didaskalikos* he treats it as logical (διαλεκτικός), in contrast with the 'theoretical' works dealing with theology, physics, and mathematics. He cites it to illustrate Plato's use of syllogistic figures, hypothetical arguments, and the ten categories. In Proclus' time some continued to regard the dialogue as a polemic against Zeno or as an exercise in dialectic.

The second main group agreed in believing that Plato's own metaphysical doctrine was to be found in the eight (or nine) Hypotheses which develop the consequences of assuming that there is, or is not, a One. The earlier members of this group identified the Existing One of Hypothesis II with *Νοῦς*; it was left for Syrianus and his successors to discover 'the most secret mystical doctrines' in the whole series of Hypotheses. Professor Dodds,[3] however, has pointed out that the Neopythagorean Moderatus, in the second half of the first century A.D., had anticipated the main features of the Neoplatonic interpretation, and that some suggestions of it may be traced a century earlier in Eudorus and perhaps as far back as Speusippus. In Plotinus (*Enn.* V, 1, 8) the mystical interpretation is associated with the emanation of all forms of being from the One who is 'beyond being'. In the first three Hypotheses (numbered I, II, and IIA in this book) he found the three ultimate hypostases of his own system: (1) the unknowable and ineffable One, identified with the Form of the Good of the *Republic*; (2) Intelligence (*νοῦς*), emanating from the One and inseparable from the realm of its own intelligible objects, the Ideas; (3) the World Soul, the Demiurge of the *Timaeus*, which, together with other souls, is responsible for the sensible world. Later Neoplatonists tried in various ways to carry the scheme of emanation through the remaining Hypotheses down to the lowest level of being and finally to not-being. The result of all this was that the *Parmenides* was promoted to be the head of a group of theological dialogues and ranked by Iamblichus [1] on a level with the *Timaeus*, the head of a physical group. The position was consolidated by the long commentary of Proclus. Whatever difficulties the later Hypotheses might offer, the Neoplatonists unanimously recognised their highest God in the One of the first Hypothesis, which is shown to be in every way unknowable and even incapable of being.

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[1] Proclus' evidence is reviewed in detail by M. Wundt, *Platons Parmenides* (1935), § 2. See also R. Klibansky's learned and masterly paper, *Ein Proklos-Fund und seine Bedeutung* (Sitzungsber. d. Heidelberger Akad. d. Wiss., 1929), from which many of the historical facts in this Preface are borrowed.

[2] C. F. Hermann's *Platonis Dialogi* (Lipsiae, 1892), vol. vi, pp. 148, 158.

[3] *C.Q.* XXII (1928), 129 ff. The *Parmenides* of Plato and the Origin of the Neoplatonic 'One'.

Proclus' Commentary extended only from the beginning of the dialogue to the end of this first Hypothesis. Consequently that part of the *Parmenides* which offers least resistance to the mystical interpretation stood out from the rest in the centuries when Plato's text was known only through the Commentary. There was no means of realising how hard it is to carry this interpretation through the remaining Hypotheses or to reconcile it with the contents and character of the dialogue as a whole. Thanks to this accident, the *Parmenides* became the ancestor of the mediaeval 'negative theology'. Even after the whole text of Plato became accessible and was translated into Latin, the theological construction held its ground. Marsiglio Ficino declared that Plato had here revealed the inmost mysteries of all theology. Leibniz,[2] who studied Plato independently, still, like Iamblichus, advised his readers to seek Plato's profoundest philosophy in the physics of the *Timaeus* and in the *Parmenides*, 'which reasons admirably concerning the One and Being, that is to say God (for all creatures are beings, not Being)'.

The Neoplatonic interpretation was also endorsed by Hegel. Unfortunately he declared further that half of his own logic was to be found in the *Parmenides*; and since then the mirage of Hegelian dialectic has sometimes reinforced, sometimes replaced, the mirage of Neoplatonic mysticism. This influence is strong, for example, in Thomas Maguire's edition (1882). It provoked Mr. W. W. Waddell (*The Parmenides of Plato*, 1894) to a wholesome protest. 'A commentator on Plato', he remarked, 'must beware of two dangers. If he does not detect in his author the latest developments of metaphysics he may be adjudged ignorant of these; if he does he may be taxed with a want of the "historic sense". The dilemma is not an agreeable one. The writer is perhaps imperfectly informed upon recent metaphysical theories, but his ignorance is not proved by a failure to read all Hegel into the *Parmenides.*'

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[1] Procl. *in Tim.* i, 13, Diehl.

[2] *Opera*, ed. Dutens, iv, p. 77.

At the opposite extreme from the Neoplatonist-Hegelian school stand the modern adherents of the logical interpretation. For some of them the second part of the *Parmenides* is a humorous polemic, designed to reduce the Eleatic doctrine of a One Being to absurdity, through the mouth of its founder. This theory, propounded by Tennemann and elaborated by Apelt, escapes the accusation of anachronism; but in its extreme form it charges the prince of philosophers with the most wearisome joke in all literature. It rests on the supposition that most of the arguments are consciously fallacious and deserve Wilamowitz's contemptuous epithet, *Schulfuchserei.* The only way to test this supposition is to examine the arguments, one by one, in their context. I hope to show that, granted certain assumptions as to the form in which Plato has chosen to cast the whole dialectical exercise, the alleged sophisms almost entirely disappear. Professor Taylor [1] formerly wrote: 'It is only of one or two steps in the argumentation at the most that we can say that they contain anything like conscious sophistry, and even at these points, whatever may be our misgivings about the validity of the inference, we seem for the most part to detect a serious significance about the conclusions thus reached which forbids us to treat them as mere pieces of verbal ingenuity.' The conviction that Plato's purpose was serious and not merely destructive grows, the more closely the Hypotheses are studied. If it is justified, the theory of the humorous polemic falls to the ground.

This conviction is presumably the cause of a recent reaction against the view championed by Apelt. Several studies have appeared of late, in which the Neoplatonic influence, sometimes combined with the Hegelian, is once more dominant. In 1923 M. Diès, in the judicious and valuable introduction to his edition, could still write: 'Il est bien entendu que chercher à faire un choix entre les hypothèses, vouloir trouver, par exemple, dans la troisième position de l'Un et dans la notion de l'Instantané, la synthèse où l'Un et le multiple se concilient, ou bien construire, au gré de ses propres orientations métaphysiques, d'autres combinaisons entre les pièces diverses de cette argumentation dialectique

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[1] *Mind,* N.S. No. 19, p. 326.

est aller contre ses intentions déclarées.' In 1926, however, M. Jean Wahl in his *Étude sur le Parménide de Platon* revived, in a modified form and with many striking additions of his own, the Plotinian scheme of interpretation, which depends on the identification of the One of the first Hypothesis with a God who is beyond being and knowledge. M. Wahl supports his case by frequent citations from Proclus and Damascius. Dr. Max Wundt (*Platons Parmenides*, 1935) adopted the conjecture of Wilamowitz and Apelt that the second part of the *Parmenides* was written independently before the first, and is therefore to be explained from itself. It is no mere logical exercise, but 'the One' must bear its full Parmenidean significance. The Neoplatonists were as right in finding Plato's metaphysics in this dialogue as in finding his physics in the *Timaeus*. Wundt's interpretation follows in their track, although the Neoplatonists (who did not agree among themselves) give him little help towards an understanding of the last four (negative) Hypotheses. Mr. W. F. R. Hardie (*A Study in Plato*, 1936), replying to Professor Taylor's attack [1] on the Neoplatonic view, concluded more cautiously that the 'transcendental' interpretation of the first two Hypotheses 'cannot be ruled out *ab initio* as unhistorical, and we are free to weigh its merits against those of other views of the dialogue' (p. 130). But Mr. Hardie recognised that 'only a close commentary on the text would verify any particular solution' (p. v); and this undertaking lay beyond the scope of his essay. Dr. A. Speiser (*Ein Parmenideskommentar*, 1937) endorses Hegel's estimate of the *Parmenides* as the greatest masterpiece of ancient dialectic. His own interpretation carries the theological view to an extreme. The proofs in the first Hypothesis that the One (which is also the Good of the *Republic*) is not many, without limits, without shape, nowhere, not in time, are understood to be denials of lower conceptions of the deity: the many gods of polytheism, the world, anthropomorphic gods, the heavenly bodies, temporal gods. Thus Plato prepared the way for Christianity. The next four Hypotheses deal with reality, the last four with appearance; the whole series covers the entire universe. Dr. Speiser treats the individual arguments in detail and makes valuable suggestions as to their bearing on fundamental concepts of metaphysics and mathematics. Signor Enzo Paci (*Il significato del Parmenide nella filosofia di Platone*, 1938) gives a more abstract interpretation, showing the influence of Julius Stenzel and based on the Neoplatonic scheme. The first three Hypotheses are concerned with the One beyond existence, the hierarchy of Forms in the ideal world, and the creation of the real world.

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[1] *The Parmenides of Plato, translated*, etc. Oxford (1934). Appendix E. I have constantly consulted this translation in making my own.

I sympathise with the Neoplatonising school in so far as they are convinced that the dialogue has a serious purpose. But I also agree with Professor Taylor's demonstration that Plotinus' scheme finds no support in the *Epistles*, and is inconsistent with Plato's theology as known to us from the *Timaeus* and the *Laws*. Further, only some of these writers have attempted to show how the whole series of arguments in the Hypotheses can be given a valid meaning. Some have been content to pick out a sentence here or there which can, without its context, be used to support their thesis. M. Wahl, Dr. Speiser, and Signor Paci have gone into more detail. Their results do not agree at all closely. The impression left is that anyone who sets out with the Neoplatonic preconception is bound to read into many of the arguments a meaning, sometimes startling in itself, which is not suggested by anything in the text, and to abandon others as pointless sophisms. Further consideration may be postponed to the commentary on the first and second Hypotheses.

This book was undertaken with the hope that a close study of the whole chain of argument would bring to light some method of interpretation that would give the dialogue a serious significance, worthy of its author and consistent with its position in the history of Greek thought. I could find not the faintest sign of any theological revelation. On the other hand there were innumerable features whose presence could not be accounted for in a mere parody or light-hearted polemic. The conclusion reached was that the second part of the dialogue is an extremely subtle and masterly analysis, dealing with problems of the sort we call logical, which we know to have been much in Plato's mind in his later period. The assumptions required to yield this conclusion will be set out in the commentary introducing the dialectical exercise.

As a general rule, Plato's predecessors and contemporaries (including Aristotle) throw a surer light upon his meaning than his remote successors, whose systems betray the influence of many centuries of religious and philosophical development. Accordingly, in a somewhat long introduction I have tried to fill in the historical background. The conversation in the dialogue arises out of a reading of Zeno's controversial treatise, directed against critics who had derided what seemed to them the absurd consequences of Parmenides' reasoning. It is necessary to form some picture of the position held by these critics themselves and of the nature of Zeno's counter-attack. Behind this controversy, again, lay Parmenides' own system; and this, in its turn, had involved the rejection of the Pythagorean doctrine he had learnt in his youth.

I have therefore begun with an attempt to reconstruct the earliest Pythagorean cosmogony. The second chapter gives an account of Parmenides' *Way of Truth* and of its relation to the rest of his poem. The third deals with Zeno and his opponents. All these topics are relevant to the understanding of the dialectical exercise, which not only includes a searching criticism of Eleatic dogma, but indicates the lines on which Plato would remodel the Pythagorean system.

The translation follows the text of Burnet's Oxford edition, with a few changes indicated in the notes. It may be useful to repeat Dr. Klibansky's warning (*op. cit.*, p. 17) that Burnet's report of Proclus' readings is based on Stallbaum's edition and needs correction.

Besides the books above mentioned, I have received help from three unpublished dissertations: *The architecture of the intelligible universe in the philosophy of Plotinus*, by Mr. A. H. Armstrong; *The concept of continuity: its development in Greek thought up to Aristotle*, by Mrs. Markwick (Miss A. T. Nicol); *Plato's later philosophy of motion*, by Mr. J. B. Skemp.

F. M. C.

LIST OF ABBREVIATIONS

Diès = Platon, Œuvres complètes, viii, *Parménide*, texte établi et traduit par Auguste Diès, Paris, 1923.

Hardie = *A Study in Plato*, by W. F. R. Hardie, Oxford, 1936.

Paci = *Il significato del Parmenide nella filosofia di Platone*, Enzo Paci, Milano, 1938.

Proclus = *Procli philosophi platonici Opera*, ed. V. Cousin, Paris, 1821.

Speiser = *Ein Parmenideskommentar* von Andreas Speiser, Leipzig, 1937.

Theon = Theonis Smyrnaei, *Expositio rerum mathematicarum ad legendum Platonem utilium*, ed. Hiller, 1878.

Waddell = *The Parmenides of Plato after the paging of the Clarke MS. with introductions, facsimiles, and notes*, by W. W. Waddell, Glasgow, 1894.

Wahl = *Étude sur le Parménide de Platon*, par Jean Wahl, Paris, 1926.

Wundt = *Platons Parmenides*, von Max Wundt, Tübinger Beiträge zur Altertumswissenschaft, Stuttgart-Berlin, 1935.

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Plato and Parmenides

INTRODUCTION

CHAPTER I

THE EARLIEST PYTHAGOREAN COSMOGONY

HE best evidence for the date of Parmenides' life is furnished by lato's dialogue. This contains an imaginary conversation of Socrates with Parmenides and his pupil Zeno when they were visiting Athens for the Great Panathenaea. Socrates was then 'quite young', perhaps eighteen to twenty; Parmenides is about sixty-five, Zeno about forty. Socrates' age fixes the date for the meeting at about 450 B.C. That would place Parmenides' birth somewhere about 515 B.C. In his poem he makes the goddess address him as a young man. If we suppose him to have been thirty, the poem would be written about 485 B.C. This date would be consistent with the fact that Heraclitus' fragments contain no reference to Parmenides, whom he would certainly have denounced even more vigorously than the other philosophers whom he names, including Xenophanes. And, on the other hand, some have seen in Parmenides a denunciation of Heraclitus as the arch-offender against reason.

The remarkable features of Parmenides' system will become intelligible only when we see his poem as a protest against the fundamental assumptions of the earlier systems which he is concerned to criticise and reject. Some of his expressions indicate that he knew the Milesian cosmogony of Anaximander and Anaximenes. But his work belongs, not to the Ionian, but to the Italian tradition. There is evidence that he had broken away from the Pythagorean school, which alone was established in Southern Italy, and he would therefore be likely to define his own position mainly in contrast with theirs. If Pythagoras settled at Croton about 530 B.C., and if Parmenides was born about 515 B.C., his teachers must have been the immediate pupils of the master. We must, accordingly, examine such traces as remain of the primitive Pythagorean cosmogony.

The peculiar difficulty here confronting us, as it confronted Aristotle and Theophrastus, is the absence of early documents. The fragments attributed to Philolaus (end of the fifth century) are all under suspicion of forgery. Plato, though familiar (at least after his first visit to Sicily in 388/7) with Pythagorean philosophy, never attributes any doctrine to an individual, with the exception of Philolaus. Aristotle ascribes various and conflicting views to 'the Pythagoreans', or 'some Pythagoreans'; and of his books on the Pythagorean philosophy only a few fragments remain. This state of affairs is due to the tradition of the school, not to claim discoveries as the achievements of individual members, but to ascribe them to the founder. Later authorities repeat this attribution uncritically, assigning to Pythagoras himself much that must belong to later times. Modern doxographers can do no more than collect the testimonies down to and including those of Aristotle and his pupils, and set them down under the heading of 'the Pythagorean School'. The lack of documents, however, does not leave us altogether without witness. We have some unquestioned information about Pythagoras. The philosophers of the fifth century, notably Empedocles and the Eleatics, were influenced by Pythagoreanism or reacted against it. Finally, common sense may tell us that some elements which persist throughout the later Pythagorean literature are obviously primitive and archaic.

We shall not be concerned here with Pythagoras as the founder of a religious community, but only with such traces as remain of his rationalised cosmology. There is no serious ground for doubting his claim to eminence among the founders of mathematical science. For his intellectual attainments we have the evidence of his contemporary Heraclitus, a hostile witness, as well as that of Empedocles and Herodotus, Aristotle and Aristoxenus.[1] It was universally believed by the ancients, whose testimony modern scholars are not in a position to disprove, that Pythagoras was the author of the doctrine that numbers are the real nature of things. It is probable, moreover, that this intuition was prompted and confirmed by his discovery that the perfect consonances which formed the framework of all musical scales (*harmoniai*) were expressible in terms of ratios between the numbers 1, 2, 3, 4: the octave being 2 : 1, the fifth 3 : 2, the fourth 4 : 3. These four numbers are the *tetractys* of the decad: $1 + 2 + 3 + 4 = 10$. The decad 'contains the whole nature of number'[2] (since all nations count up to 10 and then begin again) as well as 'all the consonances'. The *tetractys* was a symbol of great significance and, like other such symbols, capable of many interpretations. The source of the doctrine in the field of music explains the conclusion, as stated by Aristotle, that 'the whole Heaven or visible universe is a musical scale or number '. From first to last, the fundamental distinction between the two main traditions, Ionian and Italian, is that whereas the Ionian sought the nature of things in some kind of matter, the Italian laid stress on the principle of limit or form, which first appears as geometrical shape and number.[1]

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[1] See the passages referred to by Burnet, *E.G.P.*^{3}, 97–99.

[2] Ar., *Met.* 986*a*, 8; *Phys.* 206*b*, 32; *Met.* 1084*a*, 10 (Plato).

The cosmogony, then, which we seek to reconstruct takes numbers as the ultimately real things in nature. The evidence is provided, in the first place, by certain statements in Aristotle about the earliest Pythagorean doctrine known to him, going back to at least the middle of the fifth century. Secondly, these statements are confirmed by the first document which gives a connected account of Pythagoreanism. Diogenes Laertius has preserved an extract from the *Successions of Philosophers* by Alexander Polyhistor, who, writing in the first century B.C., professed to reproduce what he had found in Pythagorean treatises. Independent studies by Wellmann and Delatte led to the conclusion that Alexander's source was probably a contemporary of Plato in the fourth century.[2] No later writer could have escaped the influence of Plato himself and in particular of the *Timaeus*.[3] The first paragraph of Alexander's summary runs as follows :

> 'The first principle of all things is the One. From the One came an Indefinite Two, as matter for the One, which is cause. From the One and the Indefinite Two came numbers ; and from numbers, points ; from points, lines ; from lines, plane figures ; from plane figures, solid figures ; from solid figures, sensible bodies. The elements of these are four : fire, water, earth, air ; these change and are wholly transformed, and out of them comes to be a *cosmos*, animate, intelligent, spherical, embracing the central earth, which is itself spherical and inhabited round about.'

The opening sentences are in substantial agreement with Aristotle, who begins his historical account of the Pythagoreans with a brief statement of the doctrines held by the school in the latter part of the fifth century (the time of the Atomists, Leucippus and Democritus) and earlier.

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[1] Ar., *Met.* 1028*b*, 15 : *δοκεῖ δέ τισι τὰ τοῦ σώματος πέρατα, οἷον ἐπιφάνεια καὶ γραμμὴ καὶ στιγμὴ καὶ μονάς, εἶναι οὐσίαι, καὶ μᾶλλον ἢ τὸ σῶμα καὶ τὸ στερεόν.* *Met.* 1090*b*, 5.

[2] Diels-Kranz, *Vors.*^{5}, 58 [45], B 1*a*. Diog. L. viii, 24–33. Wellmann, *Hermes* 54 (1919), 225. Delatte, *Vie de Pythagore* (1922).

[3] The fact that Alexander uses a few phrases (e.g. ' the Indefinite Dyad ' for the Unlimited) which became current in Plato's school is no evidence against the pre-Platonic content of the doctrine. In every history of early philosophy, ancient or modern, the writer inevitably uses some language which is familiar to his contemporaries and to some degree anachronistic, however carefully he may try not to falsify the thought he is conveying. M. Robin (*Théorie plat. des Idées*, p. 650) holds that Theophrastus' attribution of ' the Indefinite Dyad ' to Pythagoreans as well as to Plato can be defended on the supposition that Pythagorean contemporaries of Plato are meant.

> ' Bred in the study of mathematics, which they were the first to advance, they thought that the principles of mathematics are the first principles of all things. Of these principles numbers are by nature the first ; and in numbers, rather than in fire or earth or water, they found many resemblances to things that exist and come into being. . . . Further, they saw that the properties and ratios of musical scales were expressible in numbers. Since, then, all other things seemed in their whole nature to be modelled after numbers, and numbers seemed to be the first things in Nature as a whole, they supposed that the elements of numbers are the elements of all things, and that the whole Heaven is a musical scale or number ' (*Met.* A, v, 985*b*, 23).

' The first principle of all things is the One.' Alexander's summary represents the second principle, which he calls the Indefinite Two, as derived from the One. Eudorus [1] (first century B.C.) also declares that the Monad is the first principle of all things and ' the supreme god ', whereas the two ' secondary principles of the nature of elements, the opposites (Limited and Unlimited) under which they ranged their two columns ', are not strictly principles but posterior to the Monad. It has been doubted whether this doctrine was a feature of the original system, and in what sense this ' One ' or Monad is to be understood. As a religious philosophy, Pythagoreanism unquestionably attached central importance to the idea of unity, in particular the unity of all life, divine, human, and animal, implied in the scheme of transmigration. The Table of Opposites, in which a column of goods and an answering column of evils are ranged under Limit and Unlimited, shows clearly how the whole view of the world was coloured by conceptions of value, foreign to the Ionian tradition. Nor is there any ground for rejecting the testimony that the principle of Unity, in some form, was regarded as divine.[2] We should expect, moreover, something analogous to the one God of Xenophanes, the One Being of Parmenides, the Sphere of Empedocles. A system of the Italian type, seeking the reality of things in form rather than matter, will not take for its starting-point an unlimited and indiscriminate mass like that ‘ Boundless ’ which Anaximander called ‘ divine ’, but which is the ancestor of the ‘ all things together ’ of Anaxagoras. As Aristotle observes, ‘ the Pythagoreans suppose that supreme beauty and goodness are not present in the beginning ; for, although the beginnings of plants and animals are causes, beauty and perfection are rather in their outcome ’ (*Met.* 1072*b*, 30). The world itself is a living creature. The element that makes it ‘ divine ’ will be the principle of beauty and goodness which is manifest in the perfection of its completed order (*κόσμος*). It is possible that this principle was from the first called Unity or ‘ the One ’, and regarded with religious reverence as the object of human aspiration. It must certainly be distinguished from the first unit of number, which provides, as we shall see, the starting-point for cosmogony.

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[1] Simplic., *Phys.* 181, 7 ff. (R.P. § 70).

[2] Hippol., *Ref.* 1, 2, *μονάδα μὲν εἶναι ἀπεφήνατο τὸν θεόν.* Aet. 1, 7, 18, *Πυθαγόρας τῶν ἀρχῶν τὴν μονάδα θεὸν καὶ τἀγαθόν.* O. Gilbert (*Arch. Gesch. Phil.* xxii (1909), 155) defends these statements against Zeller ; but he thinks that Unlimited matter (*ἄπειρον*) must have been equally eternal with the One, the divine Unity which informs it (p. 165).

Some obscurity in our sources is due to the confusion of these two senses of ‘ the One ’ (*τὸ ἕν* or *ἡ μονάς*). This expression is sometimes synonymous with the Limit (*πέρας*), which figures as the good member of the primary pair of Opposites, while the Unlimited or the Dyad is the bad.[1] So where Aristotle speaks of *Limit* and Unlimited, Alexander has ‘ the *One* and the Indefinite Two ’. Again Theophrastus writes :

> ‘ Plato and the Pythagoreans make the distance between the real and the things of nature a great one, but hold that all things wish to imitate the real ; yet since they make a sort of opposition between the One and the indefinite dyad, on which essentially depends what is indefinite and disordered and, so to speak, all shapelessness, it is absolutely impossible that for them the nature of the whole should exist without the indefinite dyad ; they say it has an equal share in things with, or even predominates over, the other principle ; whereby they make even the first principles contrary to one another. Hence those who ascribe causation to God hold that even God cannot guide everything to what is best ’ (*Metaph.* 33, trans. Ross).

Here, of course, Theophrastus is thinking mainly of the *Timaeus* ; but the passage illustrates the use of ‘ the One ’, not for an all-embracing whole, but for the good principle within that whole, which, as good, is in dualistic conflict with the principle of disorder and shapelessness, the Unlimited.

On the other hand, ‘ the One ’ sometimes means the unit of arithmetic, 1, standing at the beginning of the series of numbers. Number being defined as a plurality of units (*πλῆθος μονάδων*), the first unit is not a number, but the ' beginning of number '. As we shall see, it is the product of the two opposites, Limit and Unlimited, which are combined in its nature.

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[1] Eudorus, *loc. cit.*, *ἄλλο μέν ἐστιν ἓν ἡ ἀρχὴ τῶν πάντων, ἄλλο δὲ ἓν τὸ τῇ δυάδι ἀντικείμενον.*

We can now understand Aristotle's statement that, although numbers are ' first ' among mathematical objects, they are themselves derived from ulterior elements, which he proceeds to describe (*Met.* 986*a*, 15) :

> ' Evidently these philosophers also consider number to be a principle, both as the matter of things and as their modifications and states.[1] And as elements of number they have the Even and the Odd ; and of these the Odd is limited, the Even unlimited.'

The limited Odd and unlimited Even correspond to Alexander's One and Indefinite Two. The fundamental pair of opposites are Limit and Unlimited : Odd and Even are only the exemplification of these universal principles in the sphere of number.[2] This appears from the Table of ten Opposites ranged in two columns, which Aristotle in the same context attributes to ' other ' Pythagoreans. Here Limit and Unlimited head the list, followed by Odd and Even, Unity (*ἕν*) and Plurality (*πλῆθος*). The complete list, as given here,[3] is as follows :

Limit	Unlimited
Odd	Even
Unity	Plurality
Right	Left
Male	Female
Resting	Moving
Straight	Crooked
Light	Darkness
Good	Bad
Square	Oblong

Aristotle evidently regards this list as primitive, since he doubts whether the medical theory of Alcmaeon derived the notion of pairs of opposites from these Pythagoreans or the Pythagoreans from him; and Alcmaeon is described as a younger contemporary of Pythagoras.[1] After the first three, the items seem to be arranged in no logical order. There is nothing about any one of them to suggest a later date. It seems obvious that the ten pairs stand for ten different manifestations of the two primary opposites in various spheres; in each there is a good and an answering evil. At *Philebus* 16C, Plato speaks of a gift from heaven to mankind sent down through the agency of some Prometheus, together with a most illuminating fire; 'and the ancients, who were superior to us and dwelt nearer to the gods, have handed down a tradition that all things that are said to exist consist of a One and a Many and contain in themselves the connate principles of Limit and Unlimitedness'. The Prometheus of this revelation can hardly be other than the divine man, Pythagoras.[2] Proclus is echoing the *Philebus* when, in considering the principles of all mathematics, he speaks of Limit and Unlimited as coming first after the One and 'pervading all things that are and generating all things from themselves' (*Eucl.* I, p. 5).

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[1] This remark has reference to Aristotle's attempts to equate the principles of the earlier philosophers with one or another of his own four causes. It means that the Pythagoreans treat numbers as, in some sense, both material and formal causes of things.

[2] So Ross, *ad loc.*, and O. Gilbert, *Arch. Gesch. Phil.* xxii (1909), 29. Since 2 is the first even number, and the even falls under the unlimited, the phrase ' indefinite dyad ', though Plato gave it a peculiar sense with reference to his Great-and-Small, is not inappropriate to earlier Pythagorean conceptions.

[3] Ross gives the references to other forms of the list, in which some of the items and the number of items vary.

The first thing that they generate is the arithmetical unit, 1. After the mention of the limited Odd and unlimited Even, Aristotle proceeds:

> 'And the unit (*τὸ ἕν*) consists of both these, for it is both even and odd; and from the unit (proceeds) number'.

That 'the one' here means the unit of arithmetic is clear from its being both even and odd and from the reason given for so regarding it: 'the unit partakes of the nature of both, since when added to an even number it makes it odd, and when added to an odd number it makes it even; hence the unit is called "even-odd"'.[3] So Limit and Unlimited combine to produce the first unit; and 'from the unit (proceeds) number'. Numbers, which are pluralities of units, can be most simply obtained by adding one unit to another; (not by division, for the unit is always held to be indivisible).[4] The process will be further considered presently. Here let us observe that the plurality of numbers is not original, but derived. The system does not start, like Atomism, with an unlimited plurality of units.

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[1] This description is not in all the manuscripts, but, as Ross says, is 'likely enough to be true'.

[2] So O. Gilbert, *op. cit.*, p. 38. Plato could not so describe a doctrine which had taken shape in his own life-time.

[3] Ar., frag. 199R, ap. Theon. 1, 5, p. 22, Hiller.

[4] Rep. 525D: Mathematicians deride any attempt *αὐτὸ τὸ ἓν τέμνειν . . . μή ποτε φανῇ τὸ ἓν μὴ ἓν ἀλλὰ πολλὰ μόρια.* Is this what is referred to at *Meno*, 77A: *παῦσαι πολλὰ ποιῶν ἐκ τοῦ ἑνός, ὅπερ φασὶ τοὺς συντρίβοντάς τι ἑκάστοτε οἱ σκώπτοντες* ?

Aristotle's next words, 'and numbers are, as we said, the whole Heaven' (physical world), seem to us to take a considerable leap. But Aristotle is not here outlining the Pythagorean process of cosmogony; he merely re-states the point he is making at the moment: that numbers in this system are the material and formal causes of things, replacing the material water or air of Milesian physics. Alexander's summary here helps to fill the gap (as it seems to us) between numbers and visible and tangible bodies. When numbers have been derived from the One and the Indefinite Two,

> 'from numbers came points; from points, lines; from lines, plane figures; from plane figures, solid figures; from solid figures, sensible bodies.'

This stage takes us from arithmetic to geometry, from numbers to the solid body in three dimensions.

The transition was facilitated by the ancient practice of representing numbers by arranging units in geometrical patterns. Nicomachus,[1] where he turns to discuss the various kinds of 'linear', 'plane', and 'solid' numbers, remarks that the use of numerical symbols like ι for 10, κ for 20, is a mere human convention: 'the natural, unsophisticated, and simplest way of representing them is to set out the units in each number side by side, thus:

α for 1
αα for 2
ααα for 3, etc.'

Iamblichus (*Nicom.* 57) adds that this is the older method. Nicomachus goes on to say that the unit holds the position of a point (σημεῖον) and is the starting-point of intervals and numbers, but not as yet an interval or number, just as the point is the starting-point of line and dimension, but not as yet a line or dimension. The unit is without interval or dimension (ἀδιάστατος); the first interval appears in 2, the next in 3, and so on, interval being that which is between two terms.[2] The first dimension is called 'line', for line is that which is extended in one direction; two dimensions make surface; three, the solid. So in numbers, the unit is the starting-point of all number, which proceeds in one dimension, unit by unit; then linear number is the starting-point of plane number, which is broadened out as a surface in a second dimension; and the plane number is the starting-point of solid number, which acquires depth in the third dimension.

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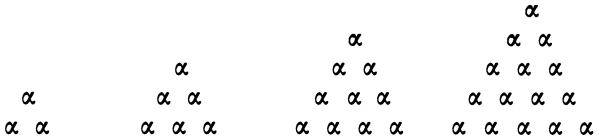
[1] *Arithm.* pp. 82 ff.

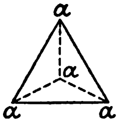
[2] Cf. Plato, *Rep.* 546B, αὐξήσεις . . . τρεῖς ἀποστάσεις τέτταρας δὲ ὅρους λαβοῦσαι, and *Parm.* 149A ff. *n* contacts involve *n* + 1 terms (ὅροι). After tracing the development in the meaning of ὅρος from its early use for boundary-stones and boundary lines, Mrs. Markwick concludes: 'As the idea of a series of numbers became more familiar, though each number was still "a collection of units" (μονάδων σύστημα, Nic., *I.A.* vii, 1), the word ὅρος was transferred from a unit of one number to a unit of a series of numbers, and ἐκτιθέναι was used to denote the setting-out of the terms in the series (Theon, p. 22, 17). . . . Thus ὅρος when used of numbers always implied something discon-

Plane numbers, Nicomachus continues, start from three as their ultimate root, the triangle being the most primitive and elementary plane figure. So, by adding to the original unit the natural numbers (2, 3, 4, 5 . . .) successively, we obtain the series:



$$1 + 2 = 3, \quad 3 + 3 = 6, \quad 6 + 4 = 10, \quad 10 + 5 = 15 \ldots$$

The first solid number is the pyramid with triangular faces, represented by four units:



Further on (p. 108) Nicomachus dwells on the distinction between square and oblong numbers. He tells us that the ancients, Pythagoras and his successors, found 'the other or otherness' in 'two', 'the same or sameness' in 'one'. They regarded 'one' and 'two' as the two principles of all things. These differ only by 1; accordingly 'the other' is originally that which is other by 1 unit, not by any other number; and the word 'other' is properly used only of two things (one and the other), not of a greater number. Moreover, 1 is the formative principle of all uneven number, 2 of all even number; hence it is reasonable to say that odd number partakes of sameness, even number of otherness. This is illustrated by the formation of square and oblong numbers. If we start with 1 unit, and add the successive odd numbers in the form of gnomons,[1]

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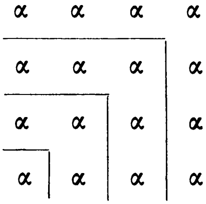
tinuous. It was first taken from the boundary-stones, then applied to units in a figured number, then to terms in a series.' (Unpublished dissertation on the Concept of Continuity, chap. i.)

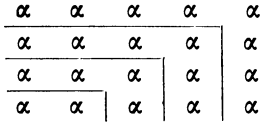
[1] The gnomon is defined by Aristotle as the figure which, when added to a square, increases its size but does not alter its form. For this and other uses of the word, see Heath, *Thirteen Bks. of Euclid*, i, 370.

the resulting figure will always be *the same*, a square:



$1 + 3 + 5 + 7 + \ldots$

If we start with two units, and dispose the successive even numbers round them in the same way, we shall obtain a series of oblongs, constantly *differing* in shape:



$2 + 4 + 6 + 8 + \ldots$

These are the oblong numbers strictly so called, forming a figure of which one side always exceeds the other by 1 unit only.

That this distinction of square and oblong numbers was significant to the earliest Pythagoreans is evident, since square and oblong appear in the list of ten Opposites given above. It is mentioned again by Aristotle where he compares the Pythagorean Unlimited with Plato's Dyad, the Great and Small:

> 'The Pythagoreans identify the Unlimited with the Even. For this, they say, when it is enclosed and limited by the Odd provides things with the element of unlimitedness. An indication of this is what happens in numbers: if gnomons are placed round the unit and apart (from the unit ?),[1] in the latter case the resulting figure is always *other* (ἄλλο), in the former it is always *one* (ἕν)' (*Phys.* 203*a*, 10).

The use here of 'one' for 'the same' and 'other' for 'different', together with Nicomachus' remarks about the proper use of the terms 'one' and 'other' may possibly confirm the statement attributed to Aristotle, that 'Pythagoras called matter "other" (ἄλλο) as being in flux and a thing that is always becoming other'.[2]

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[1] The oblong figures obtained by putting gnomons round 2 must be meant, however the words καὶ χωρίς be interpreted.

[2] Ar., frag. 207R (Damasc., *Princ.* ii, 172, Ruelle). Ἀριστοτέλης δὲ ἐν τοῖς Ἀρχυτείοις ἱστορεῖ καὶ Πυθαγόραν 'ἄλλο' τὴν ὕλην καλεῖν ὡς ῥευστὴν καὶ ἀεὶ ἄλλο καὶ ἄλλο γιγνόμενον. Delatte (*Vie de Pythagore*, 236) and Rostagni (*Il verbo*

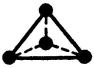
At *Met.* 1087*b*, 26 Aristotle mentions philosophers who set 'the different or the other' (τὸ ἕτερον καὶ τὸ ἄλλο) or plurality in opposition to the one (τὸ ἕν). Ps.-Alexander refers this view to 'other Pythagoreans'. Perhaps there is another trace of this expression at *Met.* 1080*b*, 6, where Aristotle, discussing Platonists and Pythagoreans together, speaks of 'those who say that the One is the first principle and substance and element of all things, and that number consists of the one and an other' (ἄλλου τινός). However this may be, we shall encounter this term 'other' where Plato generates numbers in the *Parmenides* (143B).

A large part of Pythagorean arithmetic (the theory of the nature and properties of numbers, as distinct from the art of calculation) consisted of a study of the various series resulting from arranging units in geometrical patterns. There is, therefore, nothing strange in the statement that Pythagoras specially studied 'the arithmetical form of geometry'.[1] The two sciences were not yet distinguished; for at the earliest stage the unit of arithmetic appears to have been simply identified with the geometrical point 'having position', and lines, surfaces, and solids were built up of adjacent points. This method of building solids is already attested by Speusippus, following Philolaus.[2] Enlarging on the properties of the *tetractys* of the decad, he tells us that

1 is the point ●

2 is the line ● ●

3 is the triangle

4 is the pyramid 

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di Pitagora, 43) accept this, citing Ar , *Met.* 1087*b* 26. Ross (on *Met.*, *loc. cit.*) regards it as 'most improbable, since Aristotle in his preserved works never refers to the views of Pythagoras. But he may well have ascribed the view to certain Pythagoreans, and there may easily have been late Pythagoreans, influenced by Platonism, who adopted such a view.' Cf. Robin, *Théorie plat. des Idées*, 660. This is no doubt true; but it is equally possible (though Zeller, I, i^7, p. 470^3, denies this) that ἄλλο was applied to the second element before Plato; after him we might expect to find θάτερον rather than ἄλλο. O. Gilbert (*Arch. Gesch. Phil.* xxii (1909), 149) infers from κινούμενον being ranked under ἄπειρον in the Table of Opposites that Pythagoras regarded unlimited matter as in perpetual movement. See further below, p. 152.

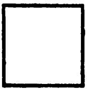
[1] Diog. L., viii, 12, τὸ ἀριθμητικὸν εἶδος αὐτῆς..

[2] Speusippus, frag 4, Lang. Diels-Kranz, *Vors.*^{5}, 44 [32] Philolaos, A 13. Burnet, *E.G.P.*^{3}, 290.

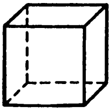
Sextus remarks that the construction of lines, planes, and solids by simply adding one unit-point to another was (as we should expect) earlier than the method of representing a single point as 'flowing' into a line, the line into a surface, the surface into a solid.[1] We may add that the fluxion method yields a geometrical progression in place of the series 1, 2, 3, 4.

The point flows into a line

the line flows into a square



the square flows into a cube



On this view the minimum solid will be, not the pyramid, but the cube. Now Plato takes the pyramid and the cube as the figures of his two extreme elements, fire and earth, and has two geometrical progressions 1, 2, 4, 8 and 1, 3, 9, 27 (representing the even and the odd numbers respectively) as the basis for the *harmonia* of the world-soul. Each progression stops at the cube, as the first solid number (*Timaeus*, 35B).

Like Sextus, Proclus also contrasts with this fluxion view the 'more Pythagorean' account of point, line, surface, solid as analogous to the numbers 1, 2, 3, 4 (*Eucl.* I, p. 96). It is easy to conjecture why the earlier view was abandoned. According to it a line is a row of unit-points set side by side; the surface is a row of such lines; the solid, a row of surfaces. Some of Zeno's arguments against the Pythagoreans turned on this conception of magnitudes as consisting of discrete points or units juxtaposed. In the later method the 'flowing' of a single point into a line secures the continuity and infinite divisibility of magnitudes, and provides also for irrational quantities represented by incommensurable lines. The discovery of the irrational $\sqrt{2}$ and of the incommensurability of the diagonal of the square must have been made at a very early stage in geometry. It would follow upon the discovery of 'the Pythagorean theorem' (Euclid, i, 47) which may be due to Pythagoras himself, though the evidence is not conclusive. There can be little doubt that the earliest Pythagoreans, before these difficulties arose, simply built all geometrical magnitudes by adding unit-points.

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[1] Ar., *de Anim.* 409*a*, 4, *ἐπεί φασι κινηθεῖσαν γραμμὴν ἐπίπεδον ποιεῖν, στιγμὴν δὲ γραμμήν, καὶ αἱ τῶν μονάδων κινήσεις γραμμαὶ ἔσονται. ἡ γὰρ στιγμὴ μονάς ἐστι θέσιν ἔχουσα.*

Following Alexander's summary, we have now reached the geometrical solid, by a continuous evolution proceeding from the elements of number to the units of number, which have now been identified with the points making up lines, surfaces, and solids. The summary continues without a break:

> ' from solid figures (come) sensible bodies. The elements of these are four: fire, water, earth, air; these change and are wholly transformed, and out of them comes to be a cosmos . . .'

The description of fire and the rest as ' elements ' must, as Wellmann remarks, come from Empedocles; and their complete transformation is Heraclitean.[1] These features cannot, therefore, belong to the primitive system, in which Air is not one of four elements on the same level, but still identified with the Unlimited void. But the preceding statement ' from solid figures, sensible bodies ' can be accepted in the light of Aristotle's testimony. We have seen that the geometrical solid was held actually to consist of the unit-points composing its lines and surfaces. In this way the solid can be said to be a number (plurality of units). Now, where Aristotle contrasts the Pythagorean view of number with the Platonic, he tells us that the Pythagorean numbers had no existence apart from sensible bodies, but sensible things actually consist of the numbers present in them.[2] The units in these numbers, moreover, have spatial magnitude (1080*b*, 19, 32): they are the indivisible magnitudes (*ἄτομα μεγέθη*, 1083*b*, 13) or atoms composing the physical body. It thus appears that the transition, ' from solid figures, sensible bodies ', can hardly be called a transition at all; numbers, as the real nature of sensible things, occupy physical space.

To Aristotle, who denied the existence of indivisible magnitudes, and held that mathematical entities are abstractions incapable of motion (the essential characteristic of all physical objects), such a view appeared crude and impossible; but his criticism ascribes it to the Pythagoreans:

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[1] D.L., viii, 35, *ἃ μεταβάλλειν καὶ τρέπεσθαι δι' ὅλων*. Empedocles' elements are not transformed into one another, and Plato's are not completely transformed, earth being excluded.

[2] The references are collected by Ross in his note on *Met.* 986*a*, 16. He adds: ' Aristotle insists that the Pythagorean theory of numbers as the substance of things was no mere symbolism, but a literal account of the nature of the physical world (989*b*, 33, N 1091*a*, 18).'

> ‘They employ less ordinary principles or elements than the physical philosophers, the reason being that they took them from non-sensible things (for the objects of mathematics, except those of astronomy, are without motion); yet all their discussions and investigations are concerned with Nature. They describe the generation of the Heaven, observing what takes place in its parts, their attributes and behaviour, and they use up their causes and principles upon this task, which implies that they agree with the physicists that the real is just all that is perceptible and contained in what they call “the Heaven”. But, as we said, the causes and principles they assign are adequate for the ascent to the higher orders of reality, and indeed appropriate to these rather than to the study of Nature. How there is to be motion, if nothing is presupposed save Limit and Unlimited, Odd and Even, they altogether fail to explain; or how, without motion and change, there can be coming into being and perishing, or the behaviour of the bodies that move in the heavens. Further, even if we granted that spatial magnitude consists of these elements, or if this were proved, how could some bodies be light, others heavy? [1] For, to judge by what they assume and maintain, what they say applies to sensible bodies just as much as to mathematical; hence they have said nothing about fire or earth or the other bodies of that sort, I suppose because they have nothing to say which applies *peculiarly* to perceptible things’ (*Met.* 989*b*, 29 ff.).

Aristotle is objecting precisely to the identification of the geometrical solid with the sensible body. The Pythagoreans did not confine their evolution to the world of mathematical abstractions. Within that world you might, by a logical process, start from the One and arrive at the figures of geometry. Such a process would be the reverse of a logical analysis, taking the geometrical solid and analysing it into its surfaces, the surfaces into lines, the lines into points, and so on. But the synthesis, having arrived again at the solid figure, ought not to cross the boundary into the physical world, without explaining how the solid can acquire motion in space and perceptible properties like weight.

Here we may digress for a moment to observe that we find a similar transition in Plato. At *Laws* 893E the Athenian distinguishes generation or coming into existence (*γένεσις*) from other processes of motion and change. The generation of all things occurs

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[1] Cf. Ar., *de caelo*, 300*a*, 15: Certain Pythagoreans construct nature and the universe out of numbers; but natural bodies have weight and lightness, whereas their units, when put together, cannot make a body or have weight.

'when a starting-point (ἀρχή) receives increase and reaches the second stage, and from that the third, and so by three stages *acquires perceptibility for percipients*'. Here the starting-point is the indivisible line (Plato's substitute for the point, which he condemned as a geometrical fiction); the second stage, the indivisible surface; the next, the indivisible solid; and the last is the solid body perceived by the senses.[1] In Plato's case, the *Timaeus* furnishes a link between the geometrical solid and the sensible body in the theory which assigns to each of the four primary bodies the structure of a regular solid.[2] It is interesting to observe that the whole course of Euclid's *Elements*, itself based on earlier handbooks of geometry compiled at the Academy, is covered by this sentence in the *Laws*. Euclid starts with the definition of the point and ends with the construction and inscription in the sphere of the regular solids which were known as the 'Platonic' or 'cosmic figures'. Hence Proclus remarks that 'with respect to subject matter, Euclid's entire discourse is concerned with the cosmic figures: he begins with their simple constituents and ends with the complexity of their construction, their inscription in the sphere and their mutual proportions. Hence some have thought that the scope of the several books is to be referred to the cosmos and their utility is to be explained with reference to the contemplation of the universe' (*Eucl.* I, p. 70). Proclus himself points out that Book I, for example, is concerned with the most primitive rectilinear figures, the triangle and the parallelogram; these genera include the principles of the elements, the isosceles and the scalene and the figures composed of these, namely the equilateral triangle and the square, which yield the construction of the figures of the four elements, fire, air, water, earth. Thus the scope of Book I fits into the scheme of the whole treatise and contributes towards the study of the elements of the cosmos (*ibid.* p. 82). Even so, however, the cosmic figures provide only the element of limit or form which is the intelligible factor in sensible things. Plato has also to recognise the pairs of opposite qualities, like hot and cold, which cause our sensations. These are represented as 'motions and powers', imagined as existing in a disorderly chaos apart from the element of geometrical form and number added by the Demiurge. Thus Plato has advanced far beyond the early Pythagoreans' simple assumption that solid and sensible body were the same thing. Alexander's summary completely ignores the difficulty of equipping a geometrical figure with sensible qualities.

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[1] So A. T. Nicol, *Indivisible Lines*, C.Q. xxx (1936), p. 125. This passage in the *Laws* will be further discussed later, p. 198.

[2] It is not impossible that the shapes of the regular solids may have been associated with the elements before Plato. Aet., ii, 6, 5, attributes this to Pythagoras. The theoretical construction of the figures, completed by Theaetetus, is an entirely different matter.

The first Pythagoreans thus appear as unaware that their cosmogony really consists of two chapters: the first mathematical, terminating in the geometrical solid, and the second physical, beginning with the first sensible body. As this distinction gradually came to be realised, the two parts of the system were differently affected by criticism and external influences. The physical part, which originally, as we shall see, had some kinship with the philosophy of Anaximenes, was modified in various ways to accommodate features borrowed from the later Ionian systems. Hence, at this point in Alexander's summary we find the intrusion of Empedocles' four 'elements' and Heraclitus' doctrine of complete transformation. On the other hand, the mathematical chapter is not affected by changes in opinion about the constitution of matter and the causes of physical change. It is only open to criticism on mathematical grounds, such as Zeno's arguments turning on the dilemmas of discrete or continuous quantity. The consequent modifications, traceable, for instance, in Plato's scheme, do not alter its main outline. This reappears in Sextus' account of Pythagorean doctrine, underneath the superficial changes chiefly due to Plato.

The Pythagorean physicists quoted by Sextus argued that the first principles must be not only imperceptible, like the atoms of Epicurus, but also incorporeal. But not all the incorporeal things that are prior to bodies are ultimate elements. Thus the solid figures, though prior to bodies in conception, are themselves reducible to planes, and these again to lines, and lines to numbers; for, as drawn from point to point, a single line involves the number 2. Finally 'all numbers fall under the One, since 2 is a *single* 2 and 3 is *one* particular thing, and 10 is a *single* compendium of number'. 'Moved by these considerations Pythagoras declared that the Monad is the first principle of things, by participation in which each several thing is called one. This principle is conceived, in its self-identity, as a Monad; but when added to itself, in respect of its otherness (*καθ' ἑτερότητα*) it creates the Indefinite Dyad. These, then, are the two principles of things (*adv. phys.* ii, 255–262). After some illustrations of the various forms in which the contrariety of these two principles is manifested, Sextus states the synthesis balancing the above analysis. 'Thus, as the highest principles of all things have emerged the primary Monad and the Indefinite Dyad; and from these, they say, arise the unit of number and the number 2. The unit comes from the primary Monad; the number 2, from the Monad and the Indefinite Dyad; for 2 is twice 1, and before 2 existed 'twice' did not exist but was taken from the Indefinite Dyad. Thus 2 came from both principles. And in the same way the remaining numbers were produced from them, the unit always acting as limit while the Indefinite Dyad generates 2 and extends the numbers to infinite plurality. In the same way they construct the cosmos and all that it contains. The point is ranked under the head of the unit; for both are indivisible, and just as the unit is a starting-point in numbers, so is the point in lines. The line is regarded as corresponding to 2, since both are conceived by way of transition, and again, the length without breadth conceived as lying between two points is a line. The plane corresponds to 3, for the plane is not regarded as mere length, like 2, but has taken to itself, in the third place, the dimension of breadth. When three points are set down, two at an interval opposite to each other and the third over against the middle of the line formed by the two, but in another dimension, the result is a plane. And the solid figure or body, such as the pyramid, is ranked under 4; for when another point is placed above the three set down as above described, the result is a pyramidal figure of solid body' (*ibid.* 276–280). After noting that this method of building up the solid by adding one unit-point to another is earlier than the conception of the single point 'flowing' into one dimension after another, Sextus concludes: 'In this way, with numbers taking the lead the solid bodies are produced; and from these finally sensible bodies also: earth, water, air, fire, and in general the cosmos. This, they say, is ordered according to a musical scale. Here, once more, they hold fast to the numbers which contain the ratios of the consonances composing the complete scale: the fourth, $\frac{4}{3}$, the fifth, $\frac{3}{2}$, and the octave, $\frac{2}{1}$' (*ibid.* 283).

Whatever may be the date of Sextus' immediate authorities, it is clear that the scheme of the mathematical chapter remains substantially unchanged. But by Sextus' time it was realised that the evolution was a logical process, not one that ever took place in time. The first Pythagoreans, on the other hand, certainly conceived of the development from the first unit of number to a plurality of units as a physical process in actual space. We know this from certain brief references in Aristotle to a Pythagorean cosmogony which cannot be much later than the end of the sixth century. At *Met.* 1091*a*, 12, Aristotle complains of Pythagoreans and Platonists for representing numbers as 'generated'; there can be no generation of eternal things. 'As for the Pythagoreans, there can be no doubt that they do represent them as generated; for they openly say that when the unit had been constructed, whether out of planes or surface (*χροιᾶς*) or out of seed or from things they are at a loss to describe, immediately the nearest parts of the Unlimited began to be drawn and limited by the Limit.' That this is not merely a generation of numbers but also a physical process of cosmogony is plain from Aristotle's next words, which declare that 'they are describing the making of a cosmos and mean what they say in a physical sense'. Accordingly he dismisses the subject as belonging to physics, not to metaphysics. As we have seen, if sensible bodies simply are numbers, pluralities of units which are themselves atomic magnitudes, then the generation of numbers from a single unit is the same thing as the generation of sensible bodies from a single atom.

The difficulty we feel in identifying the two processes becomes considerably less if we think of the evolution as having happened once for all and produced a cosmos which is everlasting and will never be destroyed and rebuilt. This was not so in the Ionian systems. For them cosmogony was a purely physical process of change; a world would at some moment begin to evolve, last for a time, and then perish to be replaced by another. In the Italian tradition there is not this succession of worlds. The world is one and everlasting.[1] So we have not to think of the generation of numbers as occurring again and again. The cosmogony is like Plato's in the *Timaeus*, where there is the same possibility of doubt whether (as most authorities hold) the cosmos never had a beginning at all, or order was created out of disorder once for all 'at the beginning'.

In Aristotle's description of the cosmogonical process there are two stages: (1) the formation of the first unit; (2) the subsequent 'drawing in' of the Unlimited, which is progressively limited by the Limit, so as to produce more and more units. Other notices, presently to be quoted, leave no doubt that the Unlimited in this system is the 'boundless breath' which is also called 'the void'. This extends outside the limited world, which, as a living creature, breathes it in.[2] It unmistakably corresponds to the boundless Air of Anaximenes, that breath or air which encompasses the whole cosmos and is compared to the human soul, which is also air.[3]

(1) Aristotle complains that the Pythagoreans 'seem at a loss to

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[1] Ar., frag. 201R, *τὸν μὲν οὐρανὸν εἶναι ἕνα.* Burnet's suggestion that Pythagoras probably believed in a plurality of co-existent worlds (*E.G.P.*^{3}, 109) is baseless and contradicts such evidence as we have. Zeller (1^7, 550) regards it as certain that the Pythagorean cosmos was never destroyed.

[2] Aet., ii, 9, 1, *οἱ μὲν ἀπὸ Πυθαγόρου ἐκτὸς εἶναι τοῦ κόσμου τὸ κενόν, εἰς ὃ ἀναπνεῖ ὁ κόσμος καὶ ἐξ οὗ.* Ar., *Phys.* 203*a*, 6, *οἱ μὲν Πυθαγόρειοι ἐν τοῖς αἰσθητοῖς (οὐ γὰρ χωριστὸν ποιοῦσι τὸν ἀριθμόν) καὶ εἶναι τὸ ἔξω τοῦ οὐρανοῦ τὸ ἄπειρον· Πλάτων δέ . . .*

[3] Anaximenes, frag. 2.

describe how the first unit was constructed so as to have magnitude '.[1] Obviously this is the first unit of number conceived as for the first time (if the process is temporal) formed or composed so as to have magnitude and occupy a position in space. Aristotle found a difficulty in understanding how and of what elements such a unit could be formed. He offers two suggestions, which should not be brushed aside as baseless conjectures. They must have been prompted by known features of the system.

The first is that this unit was composed of planes or surface (*χροιά* is the Pythagorean word for *ἐπιφάνεια*, the visible coloured superficies or boundary, *πέρας*, of a physical body, *de sensu* 439*a*, 33). A unit composed of planes is a solid; and, as we have seen, the minimum solid is the pyramid, consisting of four unit-points and having four equilateral triangular surfaces.

The second suggestion is that the constituents of this first unit with magnitude might be 'seed' (*σπέρμα*). This biological conception fits the notion of the world as a living and breathing creature, which, like other living things, would grow from a seed to its full form. It also fits in with the position of the male principle under Limit, the female under Unlimited, in the Table of Opposites, and the statement that 'the beginning of numbers is the first unit, which is male and like a father begets all the other numbers; while the number 2 is female, also called the even '.[2] This imagery survives even in the *Timaeus* (50D), where the Form is compared to a father, the Recipient (space) to a mother, and the nature that arises between them to their offspring. We find it also in one interpretation of the *tetractys*: 'The sixth *tetractys* is of things that grow (*τῶν φυομένων*): the seed is analogous to the unit and point, growth in length to 2 and the line; growth in breadth to 3 and the surface; growth in thickness to 4 and the solid' (Theon, p. 97). Aristotle himself seems to refer to the identification of unit and seed, where he asks 'Does number come from its elements as from seed ?' and objects that 'nothing can come from that which is indivisible '.[3] Indivisibility is the essential characteristic of the arithmetical unit. This view could be combined with the previous suggestion. The four units composing the pyramid might be regarded as 'seed', if the living world is to grow from this first body into all three dimensions.

It is still, perhaps, necessary to insist that too little attention is paid by historians of early philosophy to traditional images like this of the father, the mother, and the seed. They are preserved in poetry long after philosophers of the more prosaic sort have discarded them and grammarians have come to treat them as mere arbitrary ‘ metaphors ’. They are in fact survivals from a time when they were the only language available for speculation and were much more literally meant than we imagine. It is a commonplace of analytical psychology, confirmed by daily experience, that they still remain as the language of dreams. That is why they are charged with emotion in the poetry which preserves them, and also why the modern poets who renounce them and rack their brains to invent images never used before fail to produce the proper effect of poetry. The Greek poets thought otherwise. There is much light to be gained from a study of their traditional store of so-called metaphors, on the assumption that they embalm the philosophy of pre-scientific ages.

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[1] *Met.* 1080*b*, 20, *ὅπως δὲ τὸ πρῶτον ἓν συνέστη ἔχον μέγεθος ἀπορεῖν ἐοίκασιν.*

[2] Hippol., *Ref.* I, 2, 6 (*Dox.* 556).

[3] *Met.* 1092*a*, 32, *ἀλλ' ὡς ἀπὸ σπέρματος ; ἀλλ' οὐχ οἷόν τε τοῦ ἀδιαιρέτου τι ἀπελθεῖν.*

The next point is that there is ground for connecting the first unit with fire. Ross (on *Met.* 1091*a*, 15) illustrates Aristotle’s phrase ‘ the first unit constructed so as to have magnitude ’ from Philolaus, frag. 7 : ‘ the first thing formed, the unit (*τὸ πϱᾶτον ἁϱμοσθέν, τὸ ἕν*) in the midst of the Sphere is called Hestia ’, and frag. 17 : ‘ the cosmos is one and it came into being from the centre ’. In the astronomical system attributed to Philolaus this central Hearth of the universe has become an independent body round which all the other heavenly bodies, including the Earth, revolve. In the earlier Pythagoreanism and in Alexander Polyhistor’s summary the Earth was still in the centre.[1] But it has been argued by Hilda Richardson [2] that ‘ the earliest generations of the Pythagorean school conceived of fire as existing at the heart of their central, spherical earth. It was only the separation of this fire from the earth and the conversion of the earth into a planet that was late ’. She adduces Simplicius’ statement that, as opposed to the Philolaic system, the ‘ more genuine ’ Pythagorean doctrine was that of a fire in the midst of the earth, endowing it with life and heat.[3] Hestia and Earth are already identified in Sophocles (frag. 615, Pearson) and Euripides (frag. 944, N^2), and ‘ it may be considered at least probable that this identification, whoever was responsible for it, was partly due to the conception of the earth as containing fires within itself ’—a notion to which volcanoes and hot springs would naturally give rise. She also cites Anatolius *On the Decad*,[1] according to whom the Pythagoreans held that 'a certain unitary fiery cube' is situated in the midst of the elements, and Parmenides, Empedocles, and others followed them in 'placing this monadic nature, like a hearth, in the centre'. Since both Parmenides' and Empedocles' systems were geocentric, this fiery unit could only be at the core of the Earth. In view of the identification of the Unlimited with Air or darkness, 'it seems certain', as Burnet remarks, 'that Pythagoras identified the Limit with fire'.[2] Miss Richardson, accordingly, concluded that the first unit with magnitude in our cosmogony was this fiery unit at the centre, round which the boundless mist or darkness has 'condensed to form the hard solidity of earth'.

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[1] Cf. Burnet, *E.G.P.*^{3}, 111 and 297 ff.

[2] *C.Q.* xx (1926), p. 119.

[3] Simpl., *de caelo*, 512, 9. She points out that this is not to be regarded as a later modification of the Philolaic system on Zeller’s ground that it implies a rotation of the earth (Zeller,^{5}, I, p. 420). There is no such implication.

(2) Cosmogony would thus begin with the formation of the first solid, probably a pyramid, the fiery seed from which the world is to grow. The next point is the nature of the process whereby the unit is multiplied. We have here three statements from Aristotle. The first has already been quoted:

> 'When the first unit had been constructed . . . at once the nearest parts of the Unlimited began to be drawn and limited by the Limit' (1091*a*, 15).
>
> 'The Heaven is one, and from the Unlimited it draws in upon itself time and breath or the Void, which keeps the places of individual things always distinct' (frag. 201R).
>
> 'The Pythagoreans also asserted the existence of the Void, and that there comes into the Heaven, from the unlimited breath which the Heaven breathes, the Void also, which keeps things distinct, the Void being regarded as a sort of separation or division between things that are next to one another; and this occurs first in numbers, for the Void keeps their natures distinct' (*Phys.* 213*b*, 22).

The last statement, about numbers, is intelligible if we remember that numbers are composed of atomic units, which are kept distinct by intervals of vacancy (or air), as bodies which touch one another are kept from coalescing into one body. We have already seen how Aristotle describes the method by which the Unlimited is limited in the case of numbers—by adding units arranged in gnomons round 1 or 2. These patterns give a picture of the unit-points separated by blank intervals. The expansion of the pattern illustrates the multiplication of the units as more and more of the Void is drawn in.

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[1] Anatol., p. 30, Heiberg = *Vors.*^{5}, 28 [18], Parmenides, A, 44, *περὶ τὸ μέσον τῶν τεσσάρων στοιχείων κεῖσθαί τινα ἑναδικὸν διάπυρον κύβον . . . τὴν μοναδικὴν φύσιν ἑστίας τρόπον ἐν μέσῳ ἱδρῦσθαι.*

[2] *E.G.P.*^{3}, 109. There is a curious survival of this association in Ar., *de gen. et corr.* 335*a*, 15 ff.: Food is akin to matter; what is fed is the form taken with the matter. Hence fire, as the ancients say, is the only element that is 'fed'; for fire, alone or pre-eminently, is akin to form, because its natural tendency is to move to the boundary (*ὅρον*), in which the form or shape of things consists; and everything tends naturally to its own place.

The ' drawing in ' of the unlimited breath has a close analogy in the medical theory of Philolaus,[1] who taught that our bodies are constructed from the hot and have no part in the cold. The seed, which constitutes the living creature, is hot, and so also is the womb, the place (*τόπος*) in which the seed is deposited. After birth the creature draws in the breath from outside, and this is cold. It is needed in order that the heat of the body may be cooled ' by the drawing-in of this imported breath '.[2] The analogy is so close that Frank[3] attributes the cosmogony referred to by Aristotle to Philolaus himself ; but against this there is the identification of the unlimited air with the ' void '—a feature which belongs to the beginning rather than to the end of the fifth century. Air was established by Empedocles as one elementary body on a level with the other three. As such it figures in Alexander Polyhistor's summary : ' from solid figures, sensible bodies ; the elements of which are four : fire, water, earth, air '. In contrast with this, the earliest cosmogony has only two primitive factors : Fire or Light, associated with limit, and the dark Air, identified with unlimited void, the ' Night ' of pre-scientific cosmogonies.

Alexander's summary, in spite of its mention of the four elements, retains traces of the original opposition of Fire and Air.

> ' The air about the earth is stagnant and unwholesome, and everything in it is mortal ; but the uppermost air is always in motion, pure and healthy, and everything in it is immortal and so divine.[4] Sun, moon, and stars are gods ; for in them preponderates the Hot, which is the cause of life . . . Men have

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[1] *Anon. Lond.* 18, 8 (= *Vors.*^{5}, 44 [32], A, 27).

[2] *τῇ ἐπεισάκτῳ τοῦ πνεύματος ὁλκῇ.* Cf. Ar., *Phys.* 213*b*, 23, *ἐπεισιέναι αὐτὸ τῷ οὐρανῷ ἐκ τοῦ ἀπείρου πνεύματος ὡς ἀναπνέοντι καὶ τὸ κενόν.* frag. 201, *ἐπεισάγεσθαι δ' ἐκ τοῦ ἀπείρου χρόνον τε καὶ πνοὴν καὶ τὸ κενόν.* *Met.* 1091*a*, 17, *εὐθὺς τὸ ἔγγιστα τοῦ ἀπείρου εἵλκετο καὶ ἐπεραίνετο ὑπὸ τοῦ πέρατος.*

[3] *Plato u. d. sog. Pyth.* 326 ff.

[4] Wellmann (*Hermes*, 1919, 244) notes the reminiscence of this at *Phaedo* 111 A, B, where the lower air in which we live is contrasted with the aether on the ' true surface ' of the earth, where the climate is so tempered *ὥστε ἐκείνους ἀνόσους εἶναι καὶ χρόνον τε ζῆν πολὺ πλείω τῶν ἐνθάδε.*

> kinship with the gods because man partakes of the Hot ; hence God takes thought for us . . . A ray from the sun penetrates through the 'cold aether' (as they call the air) and the 'dense aether' (as they call the sea and moisture). This ray descends even to the depths and thereby quickens all things. All things live, which partake of the Hot—that is why plants also are living creatures—but not all have soul. Soul is a detached part of both the hot and the cold aether, for it partakes also of the cold aether. Soul is distinct from life, and it is immortal because that from which it is detached is immortal' (D. L., viii, 26-28).

But if the unlimited Air, considered as the breath of the living world, corresponds to the Air of Anaximenes, it is important to note that its status is radically changed. Anaximenes made Air the ultimate 'nature' or substance of all things ; but in the Pythagorean view the nature of things lies in the opposite principle of number, the units composing and bounding sensible bodies ; the unlimited is rather the empty space not occupied by body but separating bodies and their parts. In the Atomism of Leucippus and Democritus, body is 'being', the void is 'not-being'. By that time the void had become sheer vacancy, no longer confused with air. But the idea that empty space is 'not-being' seems to appear already in Parmenides ; and it follows that the identification of air and void must belong to the earliest Pythagoreanism which Parmenides was criticising.

Now, if the atoms can be identified with fire, and air is not a second element in their constitution but rather the vacancy which keeps them apart, this cosmogony agrees with a doctrine discussed by Aristotle in the *de caelo* iii, 5. That chapter criticises all who hold that there is only one primary body, and the latter part deals with those who make this body fire. Among these some simply regard fire as composed of the finest and smallest particles. Others give the fire-particles the shape of the pyramid because the pyramid is the sharpest of figures, as fire is the sharpest and most penetrating of bodies, and because all bodies are composed of the finest body and all solid figures of pyramids. Simplicius (621, 6), who has earlier mentioned Hippasus and Heraclitus, questions to what school this last theory should be assigned. Heraclitus did not say that fire was pyramidal ; and 'the Pythagoreans, who do say that fire consists of pyramids, do not say that fire is the element of the rest, if (*or* since, εἴπερ) they say that fire itself comes from water and air, as water and air come from fire'. This last feature, however, is not part of the theory as stated by Aristotle. It seems to be inferred by Simplicius from Aristotle's subsequent criticism.

But this criticism is directed not solely against the pyramidal view, but generally against all who take fire as the one primary body. Aristotle says (304*a*, 21) that both types of theory are open to the same objections. If the primary body is indivisible (*ἄτομον*), the mathematical reasons previously urged against any atomic magnitudes will apply. Then follows an objection from the physical point of view (*φυσικῶς*). This appears to assume, as an ascertained fact, that fire, air, and water turn into one another, and that these changes involve increase or decrease in volume, which cannot be explained by the hypothesis of a void, because Aristotle has disproved the existence of void. These arguments may dispose of the theory, if all Aristotle's own assumptions are granted; but there is no reason to suppose that the Pythagoreans would have granted them: they certainly believed in atomic magnitudes and in the void. If we ignore the Aristotelian assumptions, the doctrine as stated will fit the primitive cosmogony we have been reconstructing. The pyramid is the minimum solid and the fiery atom. The generation of numbers and of a plurality of bodies will be the multiplication of the first fire atom; all bodies will be aggregates of such atoms, and fire will be the only elementary body. Air or void merely keeps the units distinct. Water and Earth could be obtained by packing the atoms more closely with less void between them—a conception resembling Anaximenes' rarefaction and condensation, and actually attributed to Hippasus and Heraclitus by Theophrastus.[1] The attribution to Heraclitus is, no doubt, mistaken; but the device is appropriate to an atomic theory.[2] Even Plato, who goes as near as possible towards eliminating the void, invokes larger or smaller interstices to explain differences of weight and density.

We have now traced the whole process leading to the existence in actual space of a plurality of sensible bodies. We are given no further details that can with equal probability be assigned to the earliest form of the system. Theophrastus has a general complaint against the Pythagorean-Platonist tradition that it confines attention to the ruling principles.

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[1] Theophr., *Phys. Op.* I (Dox. 475), *Ἵππασος . . . καὶ Ἡράκλειτος . . . πῦρ ἐποίησαν τὴν ἀρχὴν καὶ ἐκ πυρὸς ποιοῦσι τὰ ὄντα πυκνώσει καὶ μανώσει καὶ διαλύουσι πάλιν εἰς πῦρ ὡς ταύτης μιᾶς οὔσης φύσεως τῆς ὑποκειμένης.*

[2] As Aristotle observes (*Met.* 988*b*, 34), the most elementary thing would be the primary thing from which others are produced by combination (*συγκρίσει*); and this property would belong to the finest and subtlest of bodies; hence this account of how other things are produced would best fit the doctrine that fire is the first principle. *πύκνωσις* is regarded as reducible to *σύγκρισις*, *Phys.* 260*b*, 11.

> ' Starting from this first principle or principles, one might demand that they should at once go on to give an account of the successive derivatives, and not proceed to a certain point and then stop ; for this is the part of a competent and sensible man, to do what Archytas once said Eurytus did when he arranged certain pebbles and explained that this is the number of man, this of horse, and this of something else. But, as it is (*νῦν*), most of them go to a certain point and then stop, as those do who set up the One and the Indefinite Dyad : after generating numbers and planes and bodies they leave out practically everything else, merely touching on other things and explaining no more than that some things proceed from the Indefinite Dyad, e.g. place, the void, the unlimited, others from numbers and the One e.g. soul and some other things ; and they generate time and the heavens simultaneously and several other things, but of the heavens and the remaining things they make no further mention ' (*Met.* 6*a*, 15).

This passage may refer specially to the Pythagoreans, since Speusippus, Xenocrates, and Plato himself are separately mentioned later.[1] Could anyone who had read the last fifty pages of the *Timaeus* accuse Plato of ' making no further mention of the remaining things ' ? But the general impression left by Aristotle's notices is that the earliest Pythagoreans were not concerned with a detailed study of nature, or the meteorology of the Ionians. ' They have said nothing about fire or earth or the other bodies of that sort, I suppose because they have nothing to say which applies *peculiarly* to perceptible things ' (*Met.* 990*a*, 16). They were interested in ' the many resemblances they seemed to see in numbers, rather than in fire or earth or water, to the things that are and come to be (such and such a property of numbers being justice, another soul or reason, another opportunity and so on with practically everything else) ; and moreover they saw that the properties and ratios of the musical scales are expressible in numbers. Since, then, all other things seemed in their nature to be modelled after numbers, and numbers to be the first things in the whole of nature, they supposed the elements of number to be the elements of all things, and the whole Heaven to be a musical scale or number. And all the properties of numbers and scales which they could show to agree with the attributes and parts and the whole arrangement of the Heaven, they collected and fitted into their scheme' (*Met.* 985*b*, 27).

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[1] ' Place, *void*, the unlimited ' is a description which suits the Pythagorean Unlimited better than Plato's Space, which was not void. ' Time and the heavens simultaneously ' is true of Plato ; but Aristotle speaks of time as entering the Heaven with ' breath and void ' from the Pythagorean Unlimited (frag. 201).

Here it may be noted that these 'resemblances' (ὁμοιώματά) between things like Justice and the properties of numbers explain why Aristotle sometimes says that things represent (μιμεῖσθαι) numbers, rather than simply *are* numbers. A sensible body, as we have seen, can be said to *be* the unit-atoms composing it; but if a man says that 'Justice is the square number' he cannot mean that Justice is a plane figure composed of four unit-points; obviously he means that the square figure is a symbol which represents or embodies the nature of fairness, just as when an honest man was called 'four-square without reproach', no one imagined that his figure really had four corners. The two modes of describing the relation of things to numbers are perfectly compatible, being respectively appropriate to different orders of 'things'.

Shortly after this passage comes the statement about the elements of number and the generation of numbers from the unit, ending 'and numbers, as we said, are the whole Heaven'. The world-order, *cosmos*, in which cosmogony terminates was not conceived, as by the Ionians, as the arrangement of the four great concentric masses of earth, water, air, and fire. The Pythagorean sciences are arithmetic, geometry, astronomy ('sphaeric'), and music, the sciences which discover the element of number, measure, proportion, in the cosmos and are studied in order to bring the soul into harmony with the objects of its contemplation. Accordingly for them the visible world is not Anaximander's battlefield in which the warring opposites perpetually encroach on one another's provinces and pay the penalty of their injustice. Rather it is the harmonious disposition of earth and the heavenly bodies according to the intervals of the musical scale. The same sciences in Plato's scheme of higher education lead to the same end, the assimilation of the soul to principles of symmetry and concord. As Socrates says earlier in the *Republic* (500B): 'One whose thought is set on reality will not have leisure to look downwards upon the field of human interests, to enter into the strife of men and catch the infection of their jealousies and feuds. His eyes are fixed upon an unchanging order; the things he contemplates neither inflict injustice nor suffer wrong, but observe due proportion and order; and of these he studies to reproduce the likeness in himself as best he can. A man cannot fail to imitate that with which he holds converse with wonder and delight. So the philosopher, holding converse with the divine and orderly, becomes, so far as man may, both orderly and divine.'[1]

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[1] The original sense of *cosmos* was social and political: the 'right order' of a state, army, or other group (cf. W. Jaeger, *Paideia* i, 108, E.T.). This

The Ionian ‘ inquiry into the nature of things ’ had no bearing on conduct and no point of contact with politics. But Pythagoras, as Plato remarks in the only passage where he mentions him by name, was pre-eminently valued for his private converse with his disciples, to whom he bequeathed a ‘ way of life ’ which marked them out from the rest of mankind (*Rep.* 600B). This way of life was characterised by Aristoxenus : ‘ Every distinction they lay down as to what should be done or not done aims at converse with the divine. This is their first principle, and their whole life is ordered with a view to following God.’ (ap. Iambl., *V. P.* 137). The ‘ following ’ or ‘ imitation ’ of the divine has been variously construed in different religious systems. It is probable that the Pythagorean construction is faithfully reproduced in the *Timaeus* (90B) :

> ‘ If a man is engrossed in appetites and ambitions and spends all his pains upon these, all his thoughts must needs be mortal and, so far as that is possible, he cannot fall short of becoming mortal altogether, since he has nourished the growth of his mortality. But if his heart has been set on the love of learning and true wisdom and he has exercised that part of himself above all, he is surely bound to have thoughts immortal and divine, if he shall lay hold upon truth, nor can he fail to possess immortality in the fullest measure that human nature admits ; and because he is always devoutly cherishing the divine part and maintaining the guardian genius (*daemon*) that dwells with him in good estate, he must needs be happy (*eudaemon*) above all. Now there is but one way of caring for anything, namely to give it the nourishment and motions proper to it. The motions akin to the divine part in us are the thoughts and revolutions of the universe ; these, therefore, every man should follow, and . . . by learning to know the harmonies and revolutions of the world, he should bring the intelligent part, according to its pristine nature, into the likeness of that which intelligence discerns, and thereby win the fulfilment of the best life set by the gods before mankind both for this present time and for the time to come.’

In this passage Plato shows how the life of religious and moral aspiration was identified with the pursuit of truth about the order of the world. Philosophy is the achievement of immortality. The goal is attained by purifying the soul of lower desires and worldly ambitions, so as to set free the divine part to apprehend the harmony of the *cosmos*, and reproduce it in the harmony of the microcosm.

conception was first projected into external Nature, and then rediscovered there and set up as a pattern to be reproduced in socialised humanity.

CHAPTER II

PARMENIDES' *WAY OF TRUTH* [1]

We have now some picture of the cosmology which Parmenides, as a dissident Pythagorean, would be primarily concerned to criticise. His logical mind rebelled against the assumption which it shared with the other systems of the sixth century. They had all described the emergence of a manifold world out of an original unity, and also recognised within the world an opposition of contraries derived from some primitive pair: the Hot and the Cold, or Fire and Air, or Light and Darkness. To Parmenides it seemed irrational and inconceivable that from an original One Being should come first two and then many. Heraclitus, too, had protested; but he attacked from the opposite quarter, denying the reality of any unchanging being. He abolished the notion of substance; nothing remains the same. Accordingly, he too rejected any cosmogony starting from a One permanent being, and accepted the world of becoming with its struggling opposites as ultimate. Parmenides took the other alternative. He held to the notion of one substantial being with all the consequences deduced by his logic. If its unity and its being are taken seriously, it cannot become two and then many; no manifold world can proceed out of the One. Therefore plurality, becoming, change, motion, are in some sense unreal.

Parmenides' choice is not that of a man of science. Aristotle calls him the antinaturalist (ἀφύσιϰος), for 'natural things' are things capable of motion. Parmenides' Pythagorean training comes out in his preference for unity, rest, limit, as against plurality, motion, the unlimited, to which the Ionian physicist felt no objection. Rather than surrender these attributes of being, he will set all common sense at defiance, and follow reason against the evidence of our eyes and ears. But, although his central doctrine, 'the real is one, limited, at rest', is ultimately traceable to religious and moral preconceptions and the symbolism of his proem indicates that the search for truth is comparable to a religious activity,[2] the truth he discovers is not animated by religious belief. He never calls his One Being ' god '. He is a curious blend of prophet and logician. Heraclitus was the prophet of a *Logos* which could be expressed only in seeming contradictions. Parmenides is the prophet of a logic which will tolerate no semblance of contradiction.

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[1] This chapter is partly based on an article, *Parmenides' Two Ways*, *C.Q.* xxvii (1933), 97, where some of the points are discussed at greater length.

[2] As Mr. C. M. Bowra points out in an interesting paper on the Proem, *Classical Philol.* xxxii (1937), 2, p. 97.

In the setting of his poem he follows the apocalyptic tradition : the truth is revealed to him by a goddess, whom he visits in a region beyond the gates of night and day. This attitude is not new. Hesiod had claimed to be taught by the Muses of Helicon. There may have been, as early as the sixth century, poems of the type of Orpheus' descent to the underworld. This traditional attitude of the poet to his work is not a mere artifice of bloodless allegory. It may be compared with Heraclitus' claim to reproduce in his treatise the Truth which stands for ever. But Parmenides is also, and above all, the man who reasons. He is the first philosopher to argue, formally deducing conclusions from premisses, instead of making dogmatic announcements. His school were the originators of dialectic. The new method of argument must have been suggested by the demonstrations of geometry, which was taking shape in Pythagorean hands and gave the first specimens of rigid proof : ' grant me certain assumptions and I will prove the rest '. The *reductio ad absurdum* was either invented or adopted by Zeno.

Parmenides' premiss states in a more abstract form the first assumption common to all his predecessors, Milesian or Pythagorean : ultimately there exists a One Being. His thought is really at work upon this abstract concept ; he considers what further attributes can, or cannot, logically belong to a being that is one. At the same time, this One Being is not a mere abstraction ; it proves to be a single continuous and homogeneous substance filling the whole of space. So far, as it seemed to him, reason will carry us, but no farther. Such a being cannot become or cease to be or change ; such a unity cannot also be a plurality. There is no possible transition from the One Being to the manifold and changing world which our senses seem to reveal. His work is accordingly divided, after the proem, into two parts. The *Way of Truth* deduces the nature of the one reality from premisses asserted as irrefragably true. It ends with a clear warning that the *Way of Seeming*, which follows, is not true or consistent with the truth. This second part, accordingly, is not in the form of logical deduction, but gives a cosmogony in the traditional narrative manner. The starting-point is the false belief of mortals, who trust their senses and accept the appearance of two opposite powers contending in the world. Unfortunately very few fragments of the second part survive ; but it is probable that we possess nearly the whole of the

Way of Truth, thanks to Simplicius, who copied it out in his commentary on the *Physics* because the book had become very rare. And it is with the *Way of Truth* that we are chiefly concerned.

Frag. 1. *Proem.*

We need not linger over the allegorical proem. Parmenides travels on the chariot of the Sun along a road, far from the beaten track of men, which leads through the gates of Day and Night. Beyond them he is welcomed by a goddess. Her dwelling on the further side of these gates must be symbolic.[1] Light and Darkness are the two chief opposites in the world of misleading appearances. Parmenides' thought has travelled beyond the region of Seeming to what Plato in the *Phaedrus* calls the Plain of Truth, visited by the soul-chariots before incarnation. The goddess approves his coming and tells him:

> 'It is meet that thou shouldst learn all things—both the unmoved heart of rounded Truth and what seems to mortals, in which there is no true belief' (1, 28–30).

The Way of Truth and the Way of Seeming (as we may call it) are the two divisions of the poem: the deduction of the nature of the the One Being and the illegitimate cosmogony.

Frags. 2, 3, 6 *ll.* 1–3. *The Way of Truth and the Way of Not-being.*

The goddess thus announces two Ways that can be followed, and are followed in the sequel. But subsequent fragments mention another Way, which cannot be followed at all, being 'utterly undiscernible'. The following passage sets this impassable Way in contrast with the Way of Truth and finally dismisses it.

> 'Come now and I will tell thee—listen and lay my word to heart—the only ways of inquiry that are to be thought of: one, that <*That which is*>[2] *is, and it is impossible for it not to be*, is the Way of Persuasion, for Persuasion attends on Truth.

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[1] I cannot remember having seen in any account of Parmenides any notice of Procl. *in Parm.* iv, 34 (Cousin), who, following Syrianus, says of Parmenides in Plato's dialogue, offering his own hypothesis for examination in the dialectical exercise, ἀλλ' οὐχὶ τὸ σεμνότατον τῶν ἑαυτοῦ δογμάτων πάρεργον ἂν ἐποιήσατο τῆς κατὰ τὴν γυμνασίαν διδασκαλίας, καίτοι νέοις προσήκειν ταύτην ἡγούμενος· ἐκεῖνο δὲ πρεσβυτικῆς εἶναι διανοίας καθορᾶν, καὶ οὐδὲ ἀνθρωπίνης, ὡς ἐν τοῖς ποίημασί φησιν, ἀλλὰ νύμφης Ὑψιπύλης τινός. This seems to mean that Parmenides called his goddess 'the nymph Hypsipyle'. The 'high gates' must be the gates of Day and Night, which the poem so elaborately describes.

[2] ἡ μὲν ὅπως ἔστι τε (Simplic., ἔστι γε, Procl.) καὶ ὡς οὐκ ἔστι μὴ εἶναι. The lack of any subject for ἔστι suggests that Parmenides wrote ἡ μὲν ὅπως ἐὸν

‘ Another, that *It is not, and must needs not be*—this, I tell thee, is a path that is utterly undiscernible ; for thou couldst not know that which is not—for that is impossible—nor utter it.

‘ For it is the same thing that can be thought and that can be.’ [1]

‘ What can be spoken of and thought must be ; for it is possible for it to be, but it is not possible for “ nothing ” to be. These things I bid thee ponder ; for this is the first Way of inquiry from which I hold thee back ’.[2]

This first Way of untruth directly contradicts the Way of Truth. The starting-point of the true Way is : *That which is, is, and cannot not-be.* The starting-point of this false Way is : *That which is, is not, and must not-be,* or *It is possible for ‘ nothing ’ to be.* Here is a flat contradiction ; one or other of these starting-points must be completely dismissed before we can advance a step in any direction. The goddess accordingly condemns the false Way as ‘ utterly undiscernible ’ : a Way starting from nonentity lies in total darkness and cannot be followed to any conclusions whatsoever. The decision here given to abandon all consideration of this Way is recalled at frag. 8, 12–18, where it is denied that anything can come into being out of non-existence : ‘ The decision concerning these things lies in this : *It is or it is not.* But the decision has been given, as is necessary—to leave that Way upon one side as unthinkable and unnamable, for it is no true Way.’ This, then, is not the false Way in which the goddess (in frag. 1) promised to instruct Parmenides and which is actually followed in the second part of the poem. Common sense and philosophers were agreed that nothing can come out of Nothing. No advance can be made from the premiss that all that exists was once in a state of non-existence, or that nonentity can exist. The goddess does indeed say that it is ‘ possible to think of ’ (*εἰσι νοῆσαι*) three alternatives, of which this premiss is one ; together they exhaust the logically conceivable possibilities. But later she calls this Way which starts from the sheer non-existence of anything ‘ unthinkable and unnamable ’ (*ἀνόητον ἀνώνυμον* 8, 17). Thought cannot pursue such a Way at all ; there is no being for thought to think of or for language to describe significantly. This impassable Way may be called, for

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ἔστι καὶ ὡς, κτλ. Cf. frag. 6, 1, ἐὸν ἔμμεναι. I do not see how ὅπως ἔστι can mean ‘ dass IST *ist* ’ (Kranz). At 8, 12, γε was inserted similarly in Simplic., F, ἔκ γε μὴ ὄντος, to fill up the metre after ἐκ μὴ ὄντος (D.E.) had come to be written for ἐκ μὴ ἐόντος. Later, however, we find ὡς ἔστι with no expressed subject (8, 2).

[1] Frags. 2 and 3, Diels-Kranz, *Vors*^{5}. (4 and 5 in earlier editions).

[2] Frag. 6, 1–3. Burnet's rendering of the first line is supported by Simplicius' paraphrase (*E.G.P.*^{3}, 174).

distinction, the Way of Not-being. It is dismissed, once for all, in the above fragments.

Frags. 6, *ll.* 4–9 ; 7. *Warning against the Way of Seeming.*

The goddess next warns Parmenides against putting his trust in that Way of Seeming in which she has said that he must be instructed, as well as in the Way of Truth. It is the Way of mortal belief based upon sense experience. Frag. 6 continues :

> ' But secondly (I hold thee back) from the Way whereon mortals who know nothing wander, two-headed ; for perplexity guides the wandering thought in their breasts, and they are borne along, both deaf and blind, bemused, as undiscerning hordes,[1] who have determined to believe that *it is and it is not, the same and not the same,* and for whom there is a way of all things that turns back upon itself (frag. 6, 4–end).
>
> For never shall this be proved : that things that are not are ; but do thou hold back thy thought from this Way of inquiry, nor let custom that comes of much experience force thee to cast along this Way an aimless eye and a droning ear and tongue, but judge by reasoning the much-debated proof I utter.[2]
>
> There is only one Way left that can be spoken of, namely, that *It is.*' (Here follows the whole Way of Truth.)

I have called this second way of untruth the ' Way of Seeming ' and translated *βϱοτῶν δόξας* (1, 30) ' what seems to mortals ', because ' opinions ' or ' beliefs ' is too narrow a rendering. ' What seems to mortals ' (*τὰ δοϰοῦντα*, 1, 31) includes (*a*) what *seems real* or appears to the senses ; (*b*) what *seems true*, what all men, misled by the senses, believe and the dogmas taught by philosophers and poets on the same basis; and (*c*) what has *seemed right* to men (νενόμισται), the decision they have 'laid down' to recognise appearances and the beliefs founded on them in the conventional institution of language. This decision is mentioned where the Way of Truth denies that any second being can arise alongside of the being that already exists: 'Therefore all those things will be a mere word—all the things that mortals have laid down (κατέθεντο), believing that they are true, namely becoming and perishing, both being and not being, change of place, and interchange of bright colour' (8, 38–41). And again, where the Way of Seeming begins: 'For mortals have laid down their decision (κατέθεντο γνώμας) to name two forms, of which it is not right to name one; and that is where they have gone astray' (8, 53–54, followed by the description of the two forms, Fire and Night, and the whole cosmogony of the second part).

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[1] This abusive denunciation of ' mortals who know nothing ' (uninitiate, in contrast with *οἱ εἰδότες, οἱ σοφοί*) may be a traditional feature borrowed from the literature of mystic revelation (Diels, *Parmenides Lehrgedicht*, 68). Cf. Kern, Orphic. Frag. 233, *θῆρές τ' οἰωνοί τε βροτῶν τ' ἀετώσια φῦλα, | ἄχθεα γῆς, εἴδωλα τετυγμένα, μηδαμὰ μηδὲν | εἰδότες,* followed by lines in imitation of Hom., *Hymn to Demeter*, 256, *νήιδες ἄνθρωποι καὶ ἀφράδμονες οὔτ' ἀγαθοῖο | αἶσαν ἐπερχομένου προγνώμεναι οὔτε κακοῖο.* Aristoph., *Birds* (Parabasis), 685, *ἄγε δὴ φύσιν ἄνδρες ἀμαυρόβιοι, φύλλων γενεᾷ προσόμοιοι, | ὀλιγοδρανέες, πλάσματα πηλοῦ, σκιοειδέα φῦλ' ἀμενηνά, κτλ.* Empedocles similarly abuses men for believing in becoming and perishing : frag. 11, ' Fools—for they have no far-reaching thoughts—who fondly think that what was not before comes into being and that a thing can perish and be utterly destroyed '.

[2] Frag. 7, restored to this place by Kranz with the approval of Diels, *Vors.*^{4} (1922), i, xxviii. Eye and ear have no real external object. The tongue may stand for taste or speech, which is sometimes ranked with the senses ; Hippocr. *π. διαίτης*, 1, 23, the seven *αἰσθήσεις* include *στόμα διαλέκτου* and respiration.

Parmenides means that all men—common men and philosophers alike—are agreed to believe in the reality of the world our senses seem to show us. The premiss they start from is neither the recognition of the One Being only (from which follows the Way of Truth and nothing more) nor the recognition of an original state of sheer nothingness (which would lead to the impassable Way of Not-being). What mortals do in fact accept as real and ultimate is a world of diversity, in which things 'both are and are not', passing from non-existence to existence and back again in becoming and perishing, and from being *this* ('the same') to being *something else* ('not the same') in change. The elements, they think, are modified or transformed on a 'way to and fro', that turns back upon itself'.[1] Becoming, change, and the diversity they presuppose must be assumed in any cosmogony. They will be assumed in the cosmogony of the second part. But Parmenides alone perceives that at this point error begins to go beyond the limits of truth.

Premisses of the Way of Truth.

In these passages Parmenides has stated the premisses from which the Way of Truth will deduce the attributes of the real.

(1) *That which is, is, and cannot not-be; that which is not, is not, and cannot be.* The real exists and can never be non-existent. It follows that there is no such thing as coming-to-be out of non-existence or perishing into non-existence. 'Being' has for Parmenides a strict and absolute sense: a thing either is or is not. If it is, it is completely and absolutely; if it is not, it is simply nothing. There are no degrees of being; a thing cannot be partly

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[1] There may be a special reference to Heraclitus' ὁδὸς ἄνω κάτω, but Anaximenes' Air also is rarefied into Fire and condensed into Water and Earth.

real and partly unreal. There can never be a state of not-being in which what is could ever be; and there can be no transition from not-being to being or from being to not-being. Nor can there be any change of that which is; for that would mean that it *is not* at one time what it is at another.

(2) *That which is can be thought or known, and uttered or truly named; that which is not, cannot.* This premiss is concerned with the relation of the real to thought and language. 'It is the same thing that can be thought and that can be '.[1] 'Thinking and the thought that "*it is*" are one and the same. For you will not find thought apart from that which is, in respect of which thought is uttered.'[2] Thought is uttered in names that are true, i.e., names of what really is. In names that are not true no thought or meaning is expressed. You will not find thought (meaning) apart from something real, which is meant by the utterance of that thought in words. There is nothing else for words to mean. Frag. 8 continues: 'For there is and shall be no other thing besides what is, since Destiny has fettered it so as to be whole and immovable.' (Since it is 'whole', complete and all-containing, there is no second thing beside it, to be thought or spoken of. And it is 'immovable' or unchangeable; so there will never be a second thing arising out of it. The real cannot cease to be just what it is and become something else). 'Therefore all those (names) will be a mere word—all the (names) that mortals have agreed upon, believing that they are true: becoming and perishing, both being and not being, change of place and interchange of bright colour.' All these terms are dismissed as empty names which are meaningless, since they do not apply to what is, and there is nothing else for them to mean.

Only what is can be thought or truly named; and only what can be thought can be. The real must be the same as the conceivable and logically coherent, what is thinkable by reasoning (*λόγος*) as opposed to the senses (frag. 7, 5). The real is the same as the rational. And the real is the only thing that can be named or 'uttered'. In a sense Parmenides does not deny that it is possible to believe and say what is false; mortals are accused of doing both. But he appears to hold the view, which was maintained later, that all false statements are meaningless. Plato formulates it as follows: 'To think (or say) what is false is to think what is not; but that is to think nothing; and that, again, is not to think at all.'[1] In a word, it is impossible to say or think what is false, because there is nothing for a false statement to mean or refer to. So Parmenides holds that false names like 'becoming', 'perishing', are meaningless. Only thought (*νοεῖν*), as distinct from belief founded on the senses, has a real object.

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[1] Frag. 3, *τὸ γὰρ αὐτὸ νοεῖν ἔστιν τε καὶ εἶναι.* I follow Zeller and Burnet in reading *ἔστιν*, 'it is possible'. Other ways of construing the words (suggested by Heidel, H. Gomperz, and others) yield the same sense. I cannot believe that Parmenides meant: 'To think is the same thing as to be.' He nowhere suggests that his One Being thinks, and no Greek of his date or for long afterwards would have seen anything but nonsense in the statement that '*A exists*' means the same thing as '*A thinks*'.

[2] Frag. 8, 34, *ταὐτὸν δ' ἐστὶ νοεῖν τε καὶ οὕνεκεν ἔστι νόημα.* The context supports the above rendering (Heidel, Fränkel, H. Gomperz, Kranz). Parmenides certainly held that there can be no thought without an object which is; but nothing in the poem supports the interpretation that thinking is the same thing as its object. Burnet's translation: 'the thing that can be (*ἔστι*) thought and that for the sake of which the thought exists is the same' is rather tautologous: it amounts to 'what can be thought is the object of thought'.

(3) *That which is, is one and cannot be many.* This is a third premiss, for which Parmenides gives no proof. Theophrastus[2] supplied it as follows: 'What is beside that which is, is not; what is not is nothing; therefore that which is, is one.' Theophrastus was probably following Aristotle[3]: 'Claiming that, besides that which is, that which is not is nothing, he thinks that that which is is of necessity one and there is nothing else'; and Aristotle himself was perhaps expanding Frag. 8, 36, 'There is and shall be no other thing besides what is.' That the real is ultimately one had been assumed from the outset of philosophy; that may be why Parmenides takes this premiss for granted. What is new is his insistence that what is one cannot also be many, or become many. The unity of the real is affirmed as strictly and absolutely as its being. The real is *unique*; there is no second thing beside it. It is also *indivisible*; it does not contain a plurality of distinct parts, and it can never be divided into parts. There cannot be a plurality of things that are (*πολλὰ ὄντα*).

THE WAY OF TRUTH

From the premisses above stated we can now turn to the Way of Truth, in which their consequences are deduced. We possess here what appears to be a continuous fragment of 61 lines. It opens, like a geometrical theorem, with a sort of enunciation of the conclusion to be proved.

Frag. 8, 1–6. *Enunciation.*

There is only one Way left to be spoken of, namely that *It is.*
And on this way are many marks, that what is is unborn and

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[1] *Theaet.*, 189A, *Soph.* 237DE, *Euthyd.* 286C, 283E. See F. M. Cornford, *Plato's Theory of Knowledge*, pp. 115, 204.

[2] Ap. Simplic., *Phys.*, 115, 11 (Parm. A 8).

[3] *Met.* 986*b*, 28.

> imperishable ; whole and unique,[1] and immovable, and without
> end (in time) ; nor was it ever, nor will it be, since it is now all
> at once, one, continuous.

The several attributes here enumerated are now established by a series of arguments.

Frag. 8, 6–21. *No coming-to-be or perishing.*

First comes the proof that what is is unborn and imperishable.

> For what birth of it wilt thou look for ? In what way and whence
> did it grow ? [2]

Birth and growth both suggest a living creature that grows by feeding on something from without. So Empedocles says of the sum of his four elements : ‘ What could augment this all and whence could it come ? ’ (17, 32). Plato too declares that the world, though living, does not draw nourishment from outside (*Tim.* 33C). Both deny the Milesian doctrine of a boundless circumambient (*περιέχον*), from which fresh material could be drawn and into which the world's substance could return when it perished. In the Pythagorean cosmogony, too, the world grew from a first unit or seed and drew in breath from the unlimited, which exists ‘ outside the Heaven ’. Parmenides is rejecting the notion that what is can have been born in this way and have grown to its present dimensions. It must always exist as a whole (*οὖλον*, *l.* 4).

Nor yet, he continues, could it have come out of sheer nothingness.

> Nor shall I let thee say or think that it came from what is not ;
> for it cannot be said or thought that ‘ it is not ’.

What is can never have been in a state of not-being ; for such a state is inconceivable and the assertion is meaningless : there is nothing for the words ‘ it is not ’ to refer to. So Melissus : ‘ What was, was always and will always be. For if it had come into being, before it came into being it must have been nothing ; and if it was nothing, nothing could ever come out of nothing ’ (frag. 1).

> And what need could have stirred it up, starting from nothing,
> to be born later rather than sooner ?
> Thus it must either be altogether or not at all.

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[1] *μουνογενές*, ‘ unique ’, the only one of its kind. This is said of the world by Plato, *Tim.* 31B, 92C (in opposition to a plurality of worlds). Presently (*ll.* 7–13) it will be proved that Being is (1) *whole*, for it does not come into existence part by part, but is ‘ all at once ’, and (2) *unique*, since no second being can arise alongside it.

[2] *αὐξηθέν*.. Perhaps *αὐξηθῆν* (like *μιγῆν*, 12, 5, and *φῦν*, 8, 10) ?, *αὐξηθῆν'*, Wilam.

This is an acute and unanswerable objection to current cosmogonies. They all assumed a process of birth or becoming which started at some moment of time. They could give no reason why it should not have started at any earlier or later moment. The last line rejects any process of becoming during which being was growing to completion and at the end of which it would be all there. ' It is now, all at once.' ' It must be *altogether* or not at all.' He now adds: Granted that it is always there as a whole, nothing further can arise alongside of it and in addition to it. It is ' unique ' (*μουνογενές* 8, 4).

> Nor will the force of belief suffer to arise out of what is not something over and above it (viz. what is [1]).

This further something would have to come out of not-being; but that is impossible. At 8, 36, he repeats: ' there is and shall be no other (*ἄλλο*) besides what is (*πάρεξ τοῦ ἐόντος*),' with the inference that all becoming and change must be mere meaningless words. The One Being exists always as a whole; nothing more and nothing different can be added. The multiplicity of forms (sensible opposites) and changes of quality which mortals believe in, cannot be real. The conclusion is that there is no way in which anything can come to be out of not-being.

> Wherefore Justice with her fetters does not let it loose or suffer
> 15 it either to come into being or to perish, but holds it fast.
> The decision concerning these things lies in this: *It is, or it is not.* But the decision has been given, as is necessary: to leave alone the one Way as unthinkable and unnamable—for it is no true Way—and that the other Way is real and true.

This refers to the decision given in frag. 2, where the Way of Not-being was finally dismissed as an ' utterly undiscernible path ', because Not-being is unknowable and unutterable (p. 31).

> And how could what is be going to be in the future? [2] And
> 20 how could it come to be? For if it came into being, it *is* not;
> nor *is* it, if it is at some time going to be.

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[1] I understand *παρ' αὐτό* to mean ' alongside of what is ', ' *etwas anderes als eben dieses* ' (Kranz), not ' *etwas anderes als eben Nichtseiendes* ' (Diels). Cf. Emped. 17, 30, *καὶ πρὸς τοῖς* (the 4 elements) *οὔτ' ἄρ τι ἐπιγίνεται.* [Ar.] MXG. 974*a*, 5, *εἴτ' ὄντων τινῶν ἀεὶ ἕτερα προσγίγνοιτο, πλέον ἂν καὶ μεῖζον τὸ ὂν γεγονέναι· ᾧ δὲ πλέον καὶ μεῖζον, τοῦτο γενέσθαι ἂν ἐξ οὐδενός.*

[2] *πῶς δ' ἂν ἔπειτα πέλοι τὸ ἐόν ;* MSS. Diels. This suits the next line (*εἴ ποτε μέλλει ἔσεσθαι*); but if some reference to perishing is thought necessary, *ἔπειτ' ἀπόλοιτο ἐόν* (Karsten, Kranz) may be right. H. Gomperz (*Psych. Beob.* 11) takes *εἰ ἔγεντο* to mean ' if it once was (but is no longer) '.

20 Thus becoming is extinguished and perishing is not to be heard of.

The statement in the enunciation, ‘Nor was it ever, nor will it be, since it is now all at once,’ is here echoed. Only the present ‘*is*’ may be used, for there is no process of becoming starting at one time and ending at another, during which we could say that it is not yet all there, but is going to be all there in the future.[1]

Aristotle summarises the Parmenidean argument, where he remarks that his own account of becoming out of potential existence is the only solution of the problem. ‘The first philosophic inquirers into the truth and the nature of things turned aside, as it were, into another way,[2] into which they were thrust by lack of experience. They say that nothing that is either comes into being or perishes, because what comes to be must do so either from what is or from what is not, and both are impossible. For what is cannot come to be, because it already is; and nothing could have come to be out of what is not, for there must be something present as a substrate. So too they exaggerated the consequence which follows and denied the very existence of a plurality of things, saying that only Being itself is.’ (*Phys.* 191*a*, 23.) Parmenides intended his denial of becoming to include all change; for in change something which was not comes to be, and something which is so-and-so comes to be not so-and-so but different and such as it was not before. All this seemed to him irrational.

The universal assumption of previous cosmogonies is thus rejected. No one, indeed, had believed that something could come out of nothing; and the philosophers of the sixth century had regarded their primary Being as a permanent and imperishable substance. But, not content with that, they had professed to derive from this one Being a manifold and changing world, which they had regarded as real. Out of a One, which always is, had come a many, which were not before and will again not be. And this had begun to happen at some moment of time. Parmenides declares all this to be not only inexplicable, but impossible. Their real primary Being admittedly never began and will never cease to exist. But besides this a real ordered world of things was to be born and grow. Out of what ? Not out of the original real Being, for that already was, absolutely and completely ; no second being could come out of it. Not out of nothing, for all agreed that nothing could come out of nothing. Therefore a changing world of many real things can never arise.

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[1] This interpretation is supported by Melissus, frag. 2, *εἰ μὲν γὰρ ἐγένετο, ἀρχὴν ἂν εἶχεν (ἤρξατο γὰρ ἄν ποτε γινόμενον) καὶ τελευτήν (ἐτελεύτησε γὰρ ἄν ποτε γινόμενον). ὅτε δὲ μήτε ἤρξατο μήτε ἐτελεύτησεν ἀεί τε ἦν καὶ ἀεὶ ἔσται, οὐκ ἔχει ἀρχὴν οὐδὲ τελευτήν. οὐ γὰρ ἀεὶ εἶναι ἀνυστόν, ὅ τι μὴ πᾶν ἔστι,* if we understand *ἤρξατο* (and *ἐτελεύτησε*) *γὰρ ἄν ποτε γινόμενον* to mean ‘it would at some time have begun (and at some time ceased) coming into being’. Sir W. D. Ross (Ar., *Physics*, p. 471–2) points out that *γινόμενον* (not *γενόμενον* as in Diels) is the true reading. He interprets *ἀρχήν* and *τελευτήν* as a *spatial* beginning (i.e. a part which came first into being) and a *spatial* end (i.e. a part which came last into being), and the conclusion as being that the real has no *spatial* beginning or end. Melissus thus argued that ‘if a change takes place, it must begin at a particular point and then spread’. This notion fits the Pythagorean evolution of the cosmos from a seed or spark which spreads to take in more and more of the unlimited. The Eleatic can admit no such process: what always is, must be ‘all at once’, never partly in existence and partly not.

[2] Parmenides’ ‘Way’ of Truth was, after all, misleading.

This first conclusion : ' No becoming or perishing of anything real ', was accepted by subsequent thinkers. They agreed that the ultimately real factors—elements, atoms, etc.—could not begin or cease to exist. But they evaded the conclusion that a manifold world could never exist by making their ultimately real things a plurality instead of a unity, and by reducing the ' becoming ' of things composed of them to a rearrangement of the ultimately real factors.

Frag. 8, 22–25. *What is, being one and homogeneous, is indivisible.*

The last paragraph showed that no second being could arise out of nothing by way of addition to the Being that always exists. Next, it is denied that this unique Being could become many by way of division, which would not involve any fresh being, but only loss of unity. Being is one, homogeneous, and continuous, without any distinction of parts, and such a unity cannot be broken up.

> Nor is it divisible, since it is all alike (homogeneous) ; nor is there something more here than there, that might hinder it from holding together, nor some part weaker, but it is all full of what is. Therefore it is all continuous ; for what is is close to what is.

The One Being, if it is really and absolutely one, is indivisible, because it is all alike (without any distinction of one part from another) and uniformly distributed ; there is not more of it in one place than in another. Also there are no gaps in it. There is, therefore, no reason why it should break up into different parts and so become many. This denial has several applications.

Anaximander's Boundless was without internal limits or distinctions (one sense of *ἄπειϱον*) until the opposites, hot and cold, began to be separated out. If so, Parmenides argues, then no distinctions could ever break out. They could be due only to some unevenness or want of homogeneity and equilibrium ; but that is inconsistent with perfect unity. So Melissus : ‘ Since it is one, it is throughout alike ; for if it were unlike, it would be more than one, and so not one but many.’ [1] It would, in fact, have distinct parts, one hot, another cold, or (as in Anaximenes’ Air) one denser, another rarer ; and there would then be at least two original beings. If there is only one, it must be all alike, and there will be no reason why it should break up into two or many.[2]

The insistence on continuity is aimed at the Pythagorean doctrine of the unlimited ‘ void ’ which was invoked to separate the units of which numbers are composed, and in cosmogony as the air or breath separating solid bodies in space. The Atomists later identified body with what is and the void with what is not, or nothing. But Parmenides declares that ‘ nothing ’ cannot exist ; and since this ‘ nothing ’ is required to separate a plurality of discrete things, there can be no such plurality. Being must be absolutely continuous. Melissus expands this doctrine : ‘ Nor is there any emptiness ; for emptiness is nothing, and what is nothing cannot be. Nor does it move ; for it has nowhere to betake itself to, but is full. If there were any emptiness, it would betake itself into the emptiness ; but since there is no emptiness, it has nowhere to betake itself to. And it cannot be dense or rare ; for the rare cannot be as full as the dense, but the rare must be emptier than the dense. What is full must be distinguished from what is not full in this way : if a thing has room for anything else and takes it in, it is not full ; if it has no room to take it in, it is full. Now it must be full, if there is no emptiness ; and if it is full, it does not move ’ (frag. 7, 7–10).

Aristotle resumes the doctrine as follows : Some of the old philosophers held that what is must be one and immovable. The void, they argue, is not ; but unless there is a void with a separate being of its own, ‘ what is cannot be moved, nor again can it be many, since there is nothing to keep things apart. And in this latter respect, they think, the view that the universe is not continuous, but consists of discrete things in contact (with no separating void, as in Empedocles) is no better than the view that it is not one thing, but many together with a void (as in Atomism) . . . Further, they maintain it is equally necessary to deny the existence of motion. Reasoning in this way, they were led to transcend sense-perception and to disregard it on the ground that one ought to follow the rational argument ; and so they assert that the universe is one and immovable ' (*de gen. et corr.* 325*a*, 2).

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[1] Restored as frag. 6*a*, by Burnet, *E.G.P.*^{3}, 322, from Simplic., *Phys.* 130, 30 ff., and MXG. 974*a*, 13.

[2] Cf. Plato, *Tim.* 57E. In a state of uniformity (ὁμαλότης) there can only be rest, for there can be no distinction of mover and moved. Motion requires lack of uniformity, due to inequality.

Aristotle's last sentence may refer to the goddess' injunction to ' judge by reasoning ' (λόγῳ), not by the senses (7, 5), or perhaps to another fragment which is relevant to our context [1] :

> Look at things which though far off (from the senses ?) are yet surely present to thought.[2] For you cannot cut off being from holding fast to being, whether as scattering itself everywhere in an order, or as coming together [3] (frag. 4 [2]).

If we trust reasoning against the senses, we shall see that Being cannot be divided and ' scattered ' to form a world order (κόσμος) ; nor can such an order be formed by putting together parts already scattered.

Parmenides means to assert that what is continuous (συνεχές) is not merely undivided but indivisible. Indivisibility always remained as the attribute of the unit of number ; and it was naturally asserted of those unit-points having magnitude which appear in the Pythagorean Atomism criticised by Zeno. It still remains in the impenetrable bodies which the later Atomists, Leucippus and Democritus, called ' being ' in contrast with the void. Only they maintain that there is eternally an unlimited number of physically indivisible beings, not one only. Aristotle,[4] on the other hand, where he criticises the Eleatic dogma that ' the All is One ', points out that Parmenides was misled by the ambiguity of the term ' one '. ' Continuous ' and ' indivisible ' are two distinct senses. If the One is continuous, it must be divisible without limit and so ' many ', at least potentially ; whereas if it is indivisible (like a mere point or arithmetical unit), there will be no quantity or quality, and the universe can be neither unlimited (Melissus), nor limited (Parmenides), for the limited is divisible, though the limit is not.

Parmenides has now denied reality to the Unlimited in all its senses. There is no boundless stuff outside, from which any part of the world's substance could be drawn. There is no void, either outside or inside the extent of Being. There is no unlimited plurality of units ; for Being is unique and cannot be increased by addition. Nor is Being infinitely divisible into a plurality, since it is homogeneous and continuous.

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[1] Possibly this fragment has dropped out after 8, 25 (Zeller-Nestle, 1^7, 692). Frag. 5 appears here in Proclus, and this may indicate a gap.

[2] Cf. Emped. 17, 81, ' Contemplate her (*Philia*) with thy thought (νόῳ) and sit not bemused by thine eyes.'

[3] Heracl. 91D, σκίδνησι καὶ πάλιν συνάγει.

[4] *Phys.* Aii, 185*b*, 6.

Frag. 8, 26–42. *What is cannot move or change.*

Motion and change had hitherto been accepted as self-evident facts, and both had been attributed by philosophers to the real primary being. This had been regarded as alive, 'immortal' as well as imperishable, and consequently as always moving; and the opposites had been separated out of it in the cosmogonical process. As Melissus' argument (p. 40) shows, it was held that nothing can move unless there is empty space for it to move into.[1] Motion accordingly becomes impossible, if there is no void. For Parmenides there can be no void, either outside his One Being or as interstices inside it; for the empty is nothing, and nothing cannot exist. Hence the One Being cannot move from place to place, nor can any motion occur within its complete continuity.

> But it is immovable in the limits of its mighty bonds, without beginning or cessation, since becoming and ceasing to be have been driven afar, and true belief has thrust them out.

'Immovable' (ἀκίνητον) denies both locomotion and change of any sort.[2] The earlier rejection of all becoming and ceasing to be is invoked as proof that no motion could ever begin or cease, and no change ever occur, since any change implies that something which was not comes to be, or something which is ceases to be.

> The same and abiding in the same (place), it is set by itself, and
> 30 thus it abides there firm and unmoved; for overmastering
> Necessity holds it in the bonds of the limit that fences it about,
> because it is not permitted that what is should be imperfect;
> for it is not in need of anything; if it were (imperfect ?), it
> would be in need of everything.[3]

The One Being is not imperfect (unfinished, incomplete, ἀτελεύτητον) and has no need or lack of anything. Parmenides connects these attributes with immovableness. They had been regarded as divine attributes. Xenophanes said of his one God: 'He always abides in the same (place) not moving at all; nor does it beseem him to shift from place to place' (frag. 26). He also objected to the gods being spoken of as masters or servants of one another, because none of them has any needs.[4] 'In discussions of the divine,' says Aristotle, ' popular philosophy often propounds the view that whatever is divine, whatever is primary and supreme, is necessarily unchangeable. This confirms what we have said ; for there is nothing else stronger than it to move it—since that would mean more divine—and it has no defect and lacks none of its proper excellences ' (*οὔτ' ἐνδεὲς τῶν αὐτοῦ καλῶν οὐδενός ἐστιν*, *de caelo* 279*a*, 31). The suggestion is that a perfect being could have no reason to change or move, as an animal must move about to supply its needs.[1] Parmenides' One Being inherits these divine characteristics, but he never calls it ' god ' or speaks of it as alive or conscious. As Diels remarks, he must have intentionally avoided associating it with the popular conception of gods. To deny all motion is to deny life ; and here Parmenides makes a clear break from earlier systems.

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[1] Plato, *Theaet.* 180E, *Μέλισσοί τε καὶ Παρμενίδαι . . . διισχυρίζονται ὡς ἕν τε πάντα ἐστὶ καὶ ἕστηκεν αὐτὸ ἐν αὑτῷ οὐκ ἔχον χώραν ἐν ᾗ κινεῖται.*

[2] Emped. 17, 13, can call his elements *unchanging* (ἀκίνητοι), though they are always moving in space.

[3] *[μὴ] ἐὸν δ' ἂν παντὸς ἐδεῖτο.* The reading is doubtful.

[4] [Plut.] Strom. 4 = *Vors.* 21 [11]A, 32, *ἐπιδεῖσθαί τε μηδενὸς αὐτῶν μηδένα μηδ' ὅλως.* Xen., *Mem.* 1, 6, 10, *νομίζω τὸ μηδενὸς δεῖσθαι θεῖον εἶναι.* Eur., *Her.* 1341,

Perfection also implies limitedness. The complete (*τέλειον*) cannot be without end (*τέλος*) or limit (*πέρας*). The assertion that Being is held by Necessity in the bonds of the limit may be directed against Anaximander's Boundless, which he called ' the divine '. It will lead presently to the assertion of spherical shape. But here the perfection and completeness of Being recalls the premiss that ' what can be thought is the same as what can be '. This Being is all that can be conceived by rational thought.

> Thinking and the thought that *it is* are one and the same.
> 35 For you will not find thought apart from that which is, in respect
> of which thought is uttered ; for there is and shall be no other
> besides what is, since Destiny has fettered it so as to be whole and
> immovable.
> Therefore all those (names) will be a mere word—all (the
> names) that mortals have agreed upon, believing that they are
> 40 true : becoming and perishing, both being and not being, change
> of place, and interchange of bright colour.

Since Being is ' whole ' and complete, there can be no other being left outside it, no second object of thought. And it is unchangeable, since there is nothing that it ' is not ' and could come to be by changing. The only quality mentioned is colour, which was regarded as the inseparable concomitant of the surface or ' limit ' of a solid body.[2] Since Being has a limit, it might be expected to have colour.

δεῖται γὰρ ὁ θεός, εἴπερ ἔστ' ὀρθῶς θεός, οὐδενός. Antiphon Soph., frag. 10 = Suid. *ἀδέητος· ὁ μηδενὸς δεόμενος καὶ πάντα ἔχων. Ἀντιφῶν ἐν ᾱ Ἀληθείας· ' διὰ τοῦτο οὐδενὸς δεῖται (θεός ? νοῦς ?) οὐδὲ προσδέχεται οὐδενός τι, ἀλλ' ἄπειρος καὶ ἀδέητος.'* (Here *ἄπειρος* appears to be used as by Anaxagoras of his *Νοῦς*. See note, ad loc., Diels-Kranz, *Vors.*^{5}, 87 [80], B, 10)

[1] At *Tim.* 33CD, Plato describes the divine universe as having no need of food from without, and then as having no limbs for locomotion.

[2] Above, p. 19.

But this Parmenides must deny, as well as all the other sensible opposites.

Frag. 8, 42–49. *The Sphere of Being.*

The above negations are now followed by the positive description of Being as a sphere.

> But since there is a furthest limit, it is complete on every side,
> like the mass of a well-rounded Sphere, everywhere equally
> poised from the midst. For it cannot be something greater or
> 45 something weaker in one place or in another. For neither is
> there a Nothing that could stop it from attaining to uniformity,
> nor could what is possibly be more here and less there, since it
> is all inviolable. For it is every way equal to itself [1] and meets
> with its limits uniformly.

Here Parmenides once more denies the void as a ‘ nothing ’ that would interrupt the continuity of Being and make it a plurality, and also any variation of density such as might destroy its equilibrium and cause it to break up into opposites preying on one another.[2] The Sphere is the obvious figure, being the only solid contained by a single unbroken surface. So Plato’s Demiurge gave the world the shape that was fitting and akin to its nature : ‘ accordingly he turned its shape rounded and spherical, equidistant every way from centre to extremity—a figure the most perfect and uniform of all ; for he judged uniformity to be immeasurably better than its opposite ’ [3] (*Tim.* 33B).

THE WAY OF SEEMING

At this point the Way of Truth ends. ‘ Here ’, the goddess continues, ‘ I put an end to the trustworthy reasoning and thought concerning the truth.’ The rational deduction of all the attributes that can belong to real Being is complete. It is a geometrical solid, occupying the whole of space, having the perfect shape of the sphere, and filled with continuous, uniform, and homogeneous ' being '. The essential point is that all these attributes belong to the categories of extension and quantity, the mathematical categories. The Sphere does not contain the opposites of sensible quality. For that reason it seems wrong to describe Parmenides' theory as *corporeal* monism. He does not call his being ' body ' (σῶμα). When Plato has spoken of the visible world as a unique and everlasting living creature, he constructs its body before turning to its soul, and remarks that ' it must needs be bodily (σωματοειδές) and so visible and tangible ; and nothing is visible without fire or tangible without earth. Accordingly the god began by making the body of the world out of fire and earth ', adding afterwards the two other elements (*Tim.* 31B). Parmenides' One Being does not contain fire and earth, and is not visible or tangible. It contains neither light and darkness, corresponding to sight, nor hard and soft, hot and cold, etc., corresponding to touch. It is an object of thought, not of the senses. The goddess now states that to add these opposites, ranged under the primary pair, Light (Fire) and Darkness (Night), is to take an illegitimate step for which reason gives no warrant. All the opposites appear to our senses, and mortals have accepted them as real ; but it is here that they have gone wrong. These qualities cannot be deduced, like the attributes so far considered, from the premisses of the Way of Truth.

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[1] οἷ, reflexive, as in Hom., *Od.* xi, 434 (Fränkel). Cf. Emp., 29, 3, σφαῖρος ἔην καὶ ‹πάντοθεν› ἶσος ἑαυτῷ.

[2] I understand ἄσυλον, ‘ inviolable ’, as negating Anaximander’s doctrine that things pay the penalty of their unjust invasions of one another’s provinces and suffer reprisals (which could be expressed by σῦλαι, σῦλον). Plato’s world needs no hands to defend itself, *Tim.* 33D.

[3] The whole context in Parmenides seems to me against the view that the Sphere is metaphorical, ‘ a simile illustrating the possibility of rational thinking ’ (A. H. Coxon, *The Philos. of Parm.*, *C.Q.* xxx, 140). It is the *movement* of spherical revolution that symbolises reason in Plato (not the shape of the figure and the equidistance of extremity from centre), and Parmenides’ sphere does not move. Also Plato takes it literally at *Soph.* 244E, and he is not the man to criticise Parmenides captiously.

Frag. 8, 50–61. *Transition to the Way of Seeming*

50 Here I put an end to the trustworthy reasoning and thought concerning the truth. Henceforward learn what seems to mortals, hearkening to the deceitful order of my words.

Parmenides was told at the outset to judge by reasoning (*κρῖναι λόγῳ* 7, 5) and not to trust his senses. Here, where false belief is about to take the mortal leap and follow the senses, the rational account (*λόγος ἠδὲ νόημα*) of the truth gives place to a ' deceitful order of words ' (*κόσμον ἐπέων*) or names. ' Cosmos ' is used with reference to its sense of world-order.[1] The cosmogony which follows in the Way of Seeming is a cosmos of false names, which are not names of the real.

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[1] As in frag. 4 [2], *σκιδνάμενον . . . κατὰ κόσμον*, and Heracl., 30D (20 Byw.). Heracl., 1, speaks of the everlasting truth (*λόγος*) which might be learnt from the words (*ἐπέων*) and things which he sets forth ; thus he claims that his words are not deceitful. Empedocles (17, 26), similarly, controverting Parmenides' denial of the visible elements, says ' *σὺ δ' ἄκουε λόγου στόλον οὐκ ἀπατηλόν*, significantly substituting *λόγου* for Parmenides' *ἐπέων*.

> For mortals have made up their minds to name two forms, of which it is not right to name one—that is where they have gone astray—and have distinguished them as opposite in fashion and assigned to them marks apart from one another: here the flaming Fire of heaven, gentle, very light, in every direction the same with itself, but not the same as the other [1]; and also that other, its very opposite, blind Night, a form dense and heavy. This disposition of things, all plausible,[2] I tell thee; for so no mortal judgment shall ever outstrip thee.

The phrase ' of which it is not right to name one ' has, I think, been misinterpreted by those who understand that mortals were wrong to name the second form, Night, but right to name the first, Fire. Aristotle, indeed, says that Parmenides ' ranked hot or fire under Being, cold or earth under Not-being '. This may not be based solely on our passage, which says nothing of hot and cold or of earth; but it must mean that fire or heat is, if not wholly real, somehow the more real of the two, or that it represents the real in the world of sensible appearance. But it is hard to believe that Parmenides, with his uncompromising alternative, ' It is or it is not,' and his absolute construction of being and not-being, can have held that fire has any claim to reality. He must have seen that our belief in the existence of fire as light or warmth rests on precisely the same ground as our belief in the existence of darkness and cold—the evidences of the senses, which see the light and feel the warmth. If the belief in fire and light as real had for him any rational basis, they would have figured in the Way of Truth; but there is not a word about them. Nor does any early philosopher conceive that one sensible opposite can exist without the other—light without darkness or heat without cold. The whole drift and meaning of the poem demand that the sense should be: mortals, though they have rightly named Being, have been wrong in going further and naming in addition *two* forms when not *one* should have been named. We must, accordingly, understand the goddess to mean: ' mortals have decided to name two forms, of which it is not right to name (so much as) one '.[3] Both names are false; neither form is real. The next fragment, which followed after a short interval, states the consequences of this error.

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[1] This phrase may throw light on the condemnation of mortals for holding that being is ' the same and not the same ' (frag. 6, 8).

[2] *ἐοικότα,* sc. *τοῖς ἐτύμοισι.* Xenoph., 35, *ταῦτα δεδοξάσθω μὲν ἐοικότα τοῖς ἐτύμοισι.* Hom., *Od.* 19, 203, and Hes., *Theog.* 27, *ψεύδεα πολλὰ ἐτύμοισιν ὁμοῖα.* Plato, *Tim.* 29c: accounts of an *εἰκών* can only be *εἰκότες λόγοι, ἀλλ' ἐὰν ἄρα μηδενὸς ἧττον παρεχώμεθα εἰκότας, ἀγαπᾶν χρή.* The last words may be Plato's paraphrase of *l.* 61.

[3] This seems to be substantially in agreement with H. Gomperz (*Psych. Beob.* 16), ' statt einer Einheit eine Zweiheit (von der eben die eine Einheit

> But now that all things have been named Light and Night and the names corresponding to their several powers have been assigned to these things and to those, the All is full at once of Light and unapparent Night, both equal, since neither has any part in the other [1] (frag. 9).

' The names corresponding to their several powers ' means the names of things (qualities, as they were to be called later) such as ' the hot ', ' the cold ', ' the light ', ' the heavy ', etc. In the fifth century [2] ' the hot ', for example, was conceived as an active ' power ' (δύναμις) residing in bodies and enabling them to act on our senses, and to cause ' affections ' (πάθη) in one another. A portion of ' the hot ' present in a body is the ' power ' which makes us feel hot and heats other, colder, bodies. ' The names corresponding to (or falling under) their several powers ' will form a list of opposite qualities, arranged, as in the Pythagorean Table of Opposites, in two sets (' these things and those ') under the primary pair:

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zu viel ist, nicht angenommen werden sollte), statt des einen wahrhaft Seienden zwei nicht wahrhaft seiende Erscheinungen '. Diels had already objected to *μίαν* as a substitute for *τὴν ἑτέρην*, but his own interpretation was forced and did not really escape the objection. See Zeller-Nestle, 1^7, 703$^{\text{n}}$. M. Diès (*Parménide*, p. 14) translates: ' ***deux formes . . . dont aucune n'est permies seule*** '.

[1] Cf. Alex. Polyh. ap. Diog. L., viii, 26 (Pythagorean doctrine): ' Things having equal part (*ἰσόμοιρα*) in the world are Light and Darkness . . .' Light and Darkness, Day and Night, Fire and ' Air '—each member of the pair has, in the ordered world, its own distinct province or lot (*μοῖρα*), fixed by Destiny. ' Fate (*εἱμαρμένη*) is the cause of things being thus disposed, both as a whole and part by part ' (*ibid.*, 27).

[2] Especially in the medical writers. See the evidence collected by J. Souilhé, *Étude sur le terme Δύναμις* (Paris, 1919). The prominence of this use of *δύναμις* in the medical writers is due to the obvious fact that a doctor is interested in substances in so far as they have the *power* to affect (*ποιεῖν*) the physical state of the patient (*ὁ πάσχων*). Hence he studies ' powers ' such as ' the sweet ', ' the bitter ', ' the saline ', etc., to find remedies containing the powers (*δυνάμεις τοῦ ποιεῖν*) required. Souilhé (p. 26), in agreement with the scholion on 8, 56–59 (Simplic., *Phys.* 31, 3), remarks on our passage: ' ces *δυνάμεις* ne sont autres que les *qualités* opposées: le chaud et le froid, le dur et le mou, le leger et le dense ', and points out that the term *δύναμις* is attributed to the doctor Alcmaeon: *'Αλκμαίων τῆς μὲν ὑγιείας εἶναι συνεκτικὴν τὴν ἰσονομίαν τῶν δυνάμεων, ὑγροῦ ξηροῦ ψυχροῦ θερμοῦ πικροῦ καὶ τῶν λοιπῶν* (Aet., v, 30, 1). See also Mr. H. C. Baldry's interesting paper on *Plato's ' Technical Terms ', C.Q.* xxxi (1937), 141 ff. Plato uses *μορφαί* and *δυνάμεις* for the qualities filling space ' before ' the Demiurge adds the geometrical shapes of the four primary bodies (*Tim.* 52D).

Light	Darkness
rare (*ἀϱαιόν*)	dense (*πυκινόν*)
light (*ἐλαφϱόν*)	heavy (*ἐμβϱιθές*), etc.

The scholium quoted by Simplicius (*Phys.* 31, 3) adds two more pairs: hot and cold, soft and hard.

So this fragment says: Once you have named (and so wrongly recognised as real) Light and Night, drawn up a list of corresponding physical qualities, and added them to the geometrical Sphere deduced in the Way of Truth, from that moment the All (namely the Sphere) will at once be full (no longer merely of homogeneous ' being ', but) of these pairs of sensible opposites. They are equally balanced, and ' neither has any part in the other ': the opposites in each pair, such as the hot and the cold, are separate things, ' apart from one another ', but capable of being combined in mixtures.[1] We shall then have recognised and added to our conception of the Sphere the plurality of powers with which bodies must be endowed in order to affect our senses and to act on one another.

The ancients debated whether the Sphere described in the Way of Truth was or was not the visible ' Heaven ' (*Οὐϱανός*).[2] The answer is that the Sphere, or ' the All ', is not the visible Heaven until it has been filled with light and darkness and all the other opposite powers; the geometrical solid filling all space then becomes the perceptible physical body of the world. The addition has converted the permanent ground of being, which alone is real, into an initial state of things (*ἀϱχή*), a possible starting-point of becoming. Given a physical body filled with opposite powers, analogous to Anaximander's unlimited body or Empedocles' Sphere, from which opposites are separated out, cosmogony can start and proceed on the traditional lines:

> Thou shalt know the nature of the sky, and all the signs in the sky, and the destructive operation of the sun's pure shining torch, and whence they arose; and thou shalt learn the wandering works of the round-eyed moon and her nature. Thou shalt know too the embracing Heaven, whence it was born, and how Necessity drove and fettered it to hold the limits of the stars . . . how

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[1] Plut., *adv. Col.* 1114B (on Parmenides), *ὅς γε καὶ διάκοσμον πεποίηται καὶ στοιχεῖα μιγνὺς τὸ λαμπρὸν καὶ σκοτεινὸν ἐκ τούτων τὰ φαινόμενα πάντα καὶ διὰ τούτων ἀποτελεῖ.*

[2] Simplic., *Phys.* 143, 4, *οὐδὲ τῷ οὐρανῷ ἐφαρμόττει τὰ παρ' αὐτοῦ λεγόμενα, ὥς τινας ὑπολαβεῖν ὁ Εὔδημός φησιν ἀκούσαντας τοῦ ' πάντοθεν εὐκύκλου σφαίρης ἐναλίγκιον ὄγκῳ.'*

> earth and sun and moon, and the common sky, and the Milky Way, and utmost Olympus, and the burning might of the stars set forth to come into being (frag. 10, 11).

The Heaven is driven (in its circular motion) by Necessity and ' fettered to hold the limits ' of the visible fiery stars. These words are meant to recall, by way of contrast, what was said of the Sphere, ' held by Necessity in the bonds of its limit ' (circumference), and ' fettered by Destiny so as to be whole and immovable ' (8, 30, 37). The limits of the stars are those bands (στέϕαναι) which Parmenides substitutes for the circles of the heavenly bodies forming the cosmic harmony of the Pythagorean Heaven. Thus the immovable and homogeneous Sphere is converted into the revolving Heaven with all the multiplicity of changing appearances.

If I have rightly interpreted the transition to the Way of Seeming, a much debated question is settled. Since this Way is denounced as false, it has been supposed that the cosmogony it contains cannot be of Parmenides' own construction. It has been regarded as either a systematisation or a mere catalogue of beliefs about the world held by ordinary men or set forth in the poetical cosmogonies and in the philosophic systems of the sixth century ; and it is understood that the whole is dismissed as simply false. On this hypothesis it is hard to account for the form and contents of this part of the poem. Though few fragments survive, we are told enough to know that there was a long and detailed cosmogony in the traditional narrative style. The principle of the harmony of opposites was restored and personified as a goddess, in the midst of the bands of the heavenly bodies, who governs all things : ' everywhere it is she who is the beginner of painful birth and marriage, sending the female to the embrace of the male, and again the male to the female '. ' First of all the gods she devised Eros.' There followed a theogony and an account of the ' violent deeds ' in the dynastic succession of the supreme gods. We hear also of an anthropogony, views about the fiery nature of the soul, an account of sense-perception, and so on. There are, moreover, some features, such as the theory of the στέφαναι, of which there is no trace elsewhere. Would any philosopher, wishing to discredit popular beliefs or the doctrines of rival schools, cast them into the form of a cosmogony, without a hint of irony, caricature, or criticism, so that the ancients themselves could not discover that the doctrines were not his own ? The doxographers attribute them to Parmenides, just like the opinions of any other philosopher.

The more natural view that the cosmogony is Parmenides' own can claim the support of Aristotle :

> ' Parmenides seems to speak with more insight (than Xenophanes and Melissus, who are " a little too crude "). For holding that, alongside what is, what is not is nothing, he thinks that what is is necessarily one and there is nothing else . . . but being constrained to fall in with obvious appearances, and supposing that, whereas the One exists according to rational argument, there is a plurality according to our senses, he restores two causes or principles, hot and cold, i.e. fire and earth ; and of these he ranks the hot under what is, the cold under what is not ' (*Met.* 986*b*, 27).

Aristotle (whether rightly or wrongly) clearly means that Parmenides [1] could not ignore the manifest appearances of the sensible world entirely, but felt bound to give some account of it, though reason might assure him that the real must be one. So he restored, ' put back again ' (*πάλιν τίθησι*), the two opposite principles which the Way of Truth had banished from the Sphere.

This is exactly what we have found the goddess doing where she passes from the Way of Truth to the Way of Seeming. If we take her language literally, she seems to suggest that mortals are responsible for the apparent (though unreal) existence of sensible qualities. When Fire and Night have been ' named ', she says, the All is at once full of both. To give a thing a substantive name is to recognise it as a substance. But Parmenides cannot have thought that men actually endowed the Heaven with all its appearances by an arbitrary agreement to give them names. If the appearances were not first given, how could mortals set about naming them ? But if the language is not taken literally, he has left the appearances unexplained. Reasoning has convinced him that they are incompatible with the necessary nature of reality. Mortals are deluded by the senses and ought not to believe in the forms which their eyes seem to reveal. Why the senses delude us, how false appearances can be given, he cannot tell. The problem was left for Plato to attempt, and he everywhere implies that no solution was to be found in Parmenides. As himself a mortal, Parmenides is constrained to fall in with obvious appearances. He gives his fable of the birth of a visible world and all its parts, perhaps a better story than others have given : ' for so no mortal judgment shall ever outstrip thee '. The story is ' plausible ', but not true ; and he knows exactly where the error comes in. It is not an alternative to the Way of Truth, for the Way of Truth is not a cosmogony, but stops short where cosmogony must begin.[1] The Way of Seeming is a continuation, but an illegitimate continuation, vitiated by the mortal leap. To borrow the language of the allegorical proem, Parmenides has turned back through the Gates of Day and Night (light and darkness) to re-enter the world of things that ' seem ', which he must also traverse on his journey through all things (*διὰ παντὸς πάντα περῶντα*, 1, 32).

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[1] The Parmenides who ' speaks with insight ' and is ' constrained to fall in with appearances ' is the man, not (as Burnet suggests, *E.G.P.*^{3}, 182) a part of the poem containing views which Aristotle knew that Parmenides condemned. Theophrastus (*Dox.* 482) simply repeats Aristotle's statement in somewhat different terms and so confirms his view. He says that Parmenides ' followed both ways ' (not the Way of Truth only) and ' tried to give an account of the origin of things ' (not merely to record the false opinions of others).

Had Parmenides been less clear-sighted, less uncompromisingly logical, his system would have been presented in a different form, as a physical doctrine of the pattern that has ever since been familiar. The Sphere of Being would have stood in the place of that rational nature of things which has been so variously conceived by science as numbers, invisible atoms, extension, energy, waves, electrical charges, and so forth. These entities seem to common sense no less far removed than the Parmenidean Sphere from the appearances they profess to support and explain ; and men of science are not always able to decide whether they have a physical existence or are convenient figments of the reason, persisting in the demand, first formulated by Parmenides, that the real shall be rational. Parmenides stands alone in his candid admission that his rational reality will not explain irrational appearances, but is irreconcilable with them. Hence his system is presented in two chapters, separated by a gap which he does not pretend to have bridged and even declares to be impassable.

This gap corresponds to the most striking and questionable transition in the Pythagorean evolution of the visible Heaven from the original One : ' from solid figure, sensible body '. Even if it be granted that the geometrical solid can be built up from, or analysed into, surfaces, lines, and points identified with the units of number, how can such a solid be endowed with perceptible qualities or ' powers ', like hot and cold ? This is precisely the objection urged by Aristotle against the Pythagoreans (p. 14 above). No process of reasoning can ever deduce the existence of such properties. But Parmenides challenges and rejects not only this step, but every step in the Pythagorean process of cosmogony. His Sphere of Being is not the outcome of any process ; ' it never was nor will be, but is now all at once '. The reasoning of the Way of Truth does not construct this Being ; it merely enumerates and establishes all the properties logically implied by the initial assertion that it *is* and that it is *one*. Parmenides holds that a One Being, such as all philosophers had posited as a starting-point, must already possess all these properties, and it can neither possess any others nor acquire them by any process of evolution.[1] What *is* cannot become ; what is *one* cannot be many. Accordingly, as Aristotle remarks, the theory that Being is one and unchangeable is not a contribution to the study of Nature. Such a Being is not a principle or starting-point (*ἀρχή*) at all, for a principle must be a principle of something other than itself, and there is nothing else (*Phys.* 184*b*, 27).

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[1] Plut., *Amat.* 756E, accordingly quotes frag. 13, *πρώτιστον μὲν Ἔρωτα θεῶν μητίσατο πάντων* as occurring *ἐν τῇ κοσμογονίᾳ*, as if this were the recognised title of the second Part. Cf. Zeller-Nestle, 1^7, 683.

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[1] So the Way of Truth is, in a sense, circular : ' It is all one to me where I begin ; for I shall come back there again ' (frag. 5 [3]).

CHAPTER III

ZENO AND PYTHAGOREAN ATOMISM

PARMENIDES is responsible for the course taken by natural philosophy in the fifth century. No advance could be made without breaking through the network of his remorseless logic, which had left the world our senses show us with no basis in true being or reality. The essential weaknesses of his reasoning were not evident to his immediate successors ; it remained for Plato to expose them. Meanwhile three attempts were made to evade some of his conclusions. If the sense world was to be rehabilitated as no mere illusion, it was necessary above all to justify the universal belief of mortals that plurality and change are facts which cannot be argued out of existence. Parmenides appeared to have proved that a manifold and changing world cannot be derived from a single homogeneous substance. His successors did not clearly see the ambiguities lurking in the terms ' unity ' and ' being ' ; but they saw that there was nothing irrational in the supposition of a plurality of real beings (*πολλὰ ὄντα*), whether limited or illimitable in number, provided that these real beings were taken as ultimate. If cosmogony could no longer start from a single principle, it was still possible to build up a world-order starting from a plurality of ultimately real factors.

All three pluralist systems were conscious and explicit replies to Parmenides. The most complex was produced by Empedocles, who belonged by origin to the Italian tradition, but fused with it elements taken from the Ionians. His Sphere differs from the Sphere of Parmenides in that it is not one homogeneous substance with unbroken continuity, but a mechanical mixture of four qualitatively different elements, which can move apart from one another without suffering any internal change. These elements are the four fundamental opposites of Anaximander—the hot, the cold, the moist, the dry—identified with Fire, Air, Water and Earth. They are eternally distinct, before as well as after the sorting-out process ; they emerge simply by moving in space, not by any mysterious process of generation from an indiscriminate fusion in which no demarcation as yet existed—if that was really what Anaximander meant by his ' Boundless '. In this way the One was always many—a One with four distinct parts. Empedocles accepted two Parmenidean conclusions: (1) the denial of the void, and (2) the maxim ‘ No becoming or perishing of anything ultimately real ’.

(1) ‘ In the All there is no part empty or too full ’ (frag. 13); ‘ In the All is nothing empty; whence then could something come into it? ’ (frag. 14). This echoes Parmenides’ denial of void spaces inside the All, and his rejection of the Pythagorean notion of a world which grows and expands by breathing in the surrounding air or vacancy. On the other hand, Empedocles saw that, if there are several elements, they can move without needing empty spaces to move into, by passing through one another and taking one another’s places. The denial of the void does not then entail the denial either of plurality or of motion.

(2) The principle of No Becoming is clearly accepted in the following fragments:

> Fools—for they have no far-reaching thoughts, who imagine that what was not before begins to be, or that a thing dies and is destroyed altogether.
>
> For it is impossible that there should be becoming out of what is not at all, and impossible and unheard-of that what is should perish utterly. For there it will always be, wherever one may keep thrusting it. (Frags. 11, 12.)

> There is no birth of any mortal things, nor any end in miserable death, but only a mixing and interchange of what is mixed; and ‘ birth ’ is only a name men give to these things (frag. 8).

Here Empedocles is denying that there is any real becoming or perishing, in the full Parmenidean sense, of ‘ mortal things ’. When a temporary compound of the four immortal elements is said to come-into-being (γίγνεσθαι) or to be born (φῦναι), we are not to suppose that anything real has come into being out of nothing, or changed. What we call ‘ becoming ’ or ‘ birth ’ is only a mixing or rearrangement of eternal unchanging elements, meeting in a new compound. When this compound is said to ‘ die ’ or to ‘ cease to be ’, the elements are merely dissolved or redistributed.

Empedocles also followed Parmenides in holding that the All is finite; it is a Sphere containing the whole of all the four elements, which are equal in extent. The significant change is the recognition of four real things—not one only—which, though eternal and unchanging and each homogeneous throughout all its parts, yet possess the fundamental contrary powers perceived by the senses and can be broken up into parts which move about in space. The ultimately real things thus become once more things that we actually perceive; reality is restored to the visible world, together with plurality and motion.

In the pure Ionian tradition Anaxagoras, not sharing the Italian prejudice against unlimitedness, retained the Milesian notion of a boundless source of materials from which a world could be formed. Like Empedocles, however, he accepts the Parmenidean maxim that nothing real can become or perish, and substitutes the combination and dissolution of a plurality of ultimate things.

> ‘The Greeks are not right in recognising (in conventional language) coming-into-being and perishing. No thing comes into being or perishes, but from things that are it is compounded and dissolved. So the right name for coming-into-being would be “being compounded”, for perishing “being dissolved”’ (frag. 17).

Like the parallel fragment of Empedocles, this probably refers primarily to the alleged becoming and perishing of individual ‘mortal’ things. Anaxagoras’ ultimate factors are different, but ordinary ‘things’ are formed and dissolved by similar processes, the combination and dissolution of permanent and immutable components. These components are unlimited in number, and they were originally ‘all together’ in a primitive mixture, from which they could be separated out without anything new coming into existence and without their suffering any change. So, like Empedocles, Anaxagoras saw that the rigid monism of Parmenides could be escaped by postulating an original plurality of ‘things that are’ and motion in space, the only change that did not involve the coming-into-being of something new. But he also saw that Empedocles had not strictly observed the canon of No Becoming; he had not felt any objection to making secondary things—all the variety of organic and inorganic substances—come into being out of things which were not those substances. A piece of flesh, for example, consists, according to Empedocles, of four distinct primary things, fire, air, water, earth, juxtaposed in nearly equal quantities. It differs from other substances in the proportion between the amounts of these constituents. Theoretically, if you cut up a piece of flesh, you will arrive at a minimum piece of flesh and after that at particles of the four elements. When you put these particles together again, flesh comes into being out of four things, none of which was flesh before, and none of which can ever cease to be what it eternally is. The only way to observe strictly the canon of No Becoming is to deny the independent existence of any elements simpler than the substances that we find in Nature and prior to them. Every natural substance must itself be elementary, since it cannot arise out of what is not itself. Hence Anaxagoras asserted two principles: infinite divisibility and homoeomereity.

The first declares that any piece of matter, however small, can always be subdivided without limit; you will never arrive at a minimum piece that resists further division. There is, in fact, no such thing as an atom.

> 'For of the small there is no least, but always a lesser; for what is cannot cease to be (by being cut up).[1] But also there is always a greater than what is great. And this is equal to the small in number; in itself each thing is both great and small' (frag. 3).

This fragment is the earliest definite statement of the paradox of infinite divisibility. Anaxagoras negates one fundamental doctrine of Atomism: the existence of physically indivisible bodies. The statement is interesting as being probably earlier than the atomism of Leucippus and Democritus. The fragment may also mean that what is some definite substance cannot cease to be that substance by being subdivided: there is no point at which what is flesh (for example) will cease to be flesh and become something else—atoms or Empedoclean elements.

This leads to the principle of homoeomereity. Lucretius (I, 834) explains what Anaxagoras meant by 'the homoeomereity of things, as he called it' (*rerum quam dicit homoeomerian*). Natural substances are composed of smaller parts of the same substance (not of anything more ultimate), so that every part, however small, is like every other part and like the whole. Any fraction of a piece of gold or a piece of flesh will still be gold or flesh, however far the division be carried. We need not enter into the difficulties of harmonising these principles with the repeated statement that 'there is a portion of everything in everything'. It is enough to note that Anaxagoras' assertion of infinite divisibility and homoeomereity seems to be inspired by his determination to observe Parmenides' maxim of No Becoming more strictly than either Empedocles or the contemporary atomists. For homoeomereity implies that all the qualities we actually perceive in macroscopic objects continue to exist in any subdivision of those objects, however small, though they may be below the level of perception.

Empedocles and Anaxagoras have been mentioned for the sake of comparison with a third way of escape from Parmenidean monism.

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[1] τὸ γὰρ ἐὸν οὐκ ἔστι τὸ μὴ (τομῇ, Zeller) οὐκ εἶναι. Zeller's τομῇ is held to involve bad grammar (οὐκ εἶναι for μὴ εἶναι); and as Diels remarks, the notion is easily supplied from the foregoing context. If τομῇ is to be inserted, we might read οὐκ ἔστι το‹μῇ› μὴ οὐκ εἶναι.

This is an early form of atomism, the existence of which in the first half of the fifth century, before Leucippus, can be inferred from what we know of Zeno's controversial treatise. In the *Parmenides* (128C), Zeno is made to describe the treatise there quoted as a work of his youth, which had not been intended for publication. When a man of forty speaks of his youth, he presumably means his early twenties; and if we accept Plato's dates, this would mean that Zeno wrote it between 470 and 465. He calls it a defence of Parmenides' main thesis, in the form of a counter-attack upon those who derided the One Being as entailing many absurd contradictions. The treatise was designed to show that still more absurd consequences follow from the critics' own thesis, that there exists a plurality of things.

Both Plato and Simplicius speak as if they knew of only one treatise by Zeno. It appears to have been divided into several arguments (*λόγοι*), each of which contained more than one section.[1] A section was called a *hypothesis* because it opened with a sentence of the type: '*If things are many*, they must be both like and unlike' (*Parm.* 127E). Each of the two contrary consequences was established by a short argument. The conclusion was then drawn, that since the consequences are contradictory, the hypothesis is false. Here, for example, is one section (frag. 3), most of which is preserved by Simplicius:

> 'If things are many, the same things must be both finite and infinite in number.
>
> For (*a*) if things are many, they must be just as many as they are, neither more nor less. But if they are as many as they are, they will be finite in number.
>
> (*b*) If things are many, they will be infinite in number. For there will always be others between any of them, and again between these yet others. So things are infinite in number.
>
> But the same things cannot be both finite and infinite in number.
>
> Therefore things are not many.'

From the fragments and from references in Plato and Proclus we obtain the following list of contraries which appeared in the various sections. Some conjectural items are added in italics:

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[1] *Parm.* 127D, speaks of 'the first section (*ὑπόθεσις*, Plato, *ἐπιχείρημα*, Simplic.) of the first argument' (*λόγος*). See Zeller-Nestle, 1^7, 744. Proclus, it seems, had not seen the book, and his statement that there were 40 *λόγοι* is untrustworthy. Three of Suidas' four titles of Zeno's works (*Πρὸς τοὺς φιλοσόφους*, *Ἔριδες*, *Περὶ φύσεως*) may be various titles of the one book.

One and Many (*Parm.* 129B, D. *Phaedr.* 261D, the Eleatic Palamedes (Zeno) can ‘ make the same things appear both one and many ’).

Divisible and Indivisible (see Lee, *Zeno of Elea*, Section on Plurality, pp 12 ff. and notes).

Finite and Infinite in number (frag. 3).

At Rest and in Motion (*Phaedr.* 261D, *μένοντά τε καὶ φερόμενα*. *Parm.* 129E, *στάσιν καὶ κίνησιν*).

In itself and In another (?). (See below, p. 149).

Same and Different (Procl. iv, 22).

Like and Unlike (*Parm.* 127E. *Phaedr.* 261D. Procl. *ibid.*).

In contact and Not in contact (?). (See below, p. 167.).

Large and Small (frag. 2).

Equal and Unequal (Procl. *ibid.*).

This list corresponds pretty closely with the series of contraries in the Hypotheses of the *Parmenides*.

Since Tannery wrote his masterly chapter on Zeno it has been clear that the pluralist critics of Parmenides were Pythagoreans. Zeno’s fragments show that the ‘ things ’ which they asserted to be many, in spite of Parmenides’ demonstrations, were not the elements of Empedocles or the homoeomeries of Anaxagoras. Zeno is attacking a form of the original doctrine that all things are numbers. The assertion that ‘ things are many ’ probably covered the following propositions. (1) There is a plurality of concrete things, bodies capable of motion, such as our senses show us. Parmenides’ arguments have not succeeded in reducing these to mere illusion. (2) Each of these concrete bodies is a number, or plurality of units. A body is composed of planes, a plane of lines, a line of points. Thus any body can be built up of point-units suitably arranged ; and the body will be the sum of those units. (3) These units themselves are an ultimate plurality of things having all the reality claimed for Parmenides’ One Being. Since magnitudes are composed of them, they must have some magnitude ; but, being the ultimate units, they must be indivisible. They are, in fact, indivisible magnitudes (*ἄτομα μεγέθη*). They are the units of arithmetic, the points of geometry with position in physical space, and the atoms of which sensible bodies are composed.

It has been shown that Zeno’s arguments become intelligible, when they are taken as directed against a plurality of units having the above combination of properties. He was not directly arguing that plurality and motion cannot exist ; nor even that space, time and motion must be not discrete but continuous. He was only proving that his opponents’ theory of their nature is inconsistent with itself. They appear to have maintained the original confusion, noted by Aristotle, of geometrical solids with physical bodies (above, p. 14). But, when thinking mathematically, they admitted that geometrical magnitudes are infinitely divisible (a line, however short, can always be bisected); whereas their physical bodies require units which have magnitude (otherwise they would be 'nothing', and no sum of nothings can ever make up something) and yet are indivisible, being the ultimate units. Zeno's arguments appear to be directed against the inconsistencies of this position. His dilemmas avail themselves of two incompatible views of magnitude, in the wide sense which covers space, time, motion, geometrical magnitude, and physical body as extended. One half of an argument will assume that magnitude is continuous and therefore divisible into parts without limit; the other half, that it is discrete and composed of a finite number of indivisible units. Some of these arguments will be considered later in connection with passages in the latter part of the *Parmenides* which seem to allude to them.

It is probable—though here we are reduced to mere conjecture—that these Pythagorean opponents of Parmenides had, like the other contemporary pluralists, admitted some of the Eleatic conclusions. That would explain why it was no longer necessary for Zeno to attack those features of the original Pythagorean system which Parmenides had admittedly disposed of. If these pluralists, like Empedocles and Anaxagoras, accepted the principle: 'No becoming of anything that is ultimately real', they also would reduce all so-called becoming and change to rearrangement in space of their immutable units. This would mean asserting the ultimate reality of an unlimited number of units. They would drop the mysterious evolution of numbers from the first unit and the opposites, Limit and Unlimited. There is no need for the One to become many, if we assume instead any number of ones or units which eternally are many. They could thus acknowledge that Parmenides had cancelled the first chapter of Pythagorean evolution. What view they took of the opposites of sensible quality, headed by Light and Darkness, we cannot say. Nothing in Zeno's arguments has any reference to qualities of this sort. They may, like the later atomists, have accepted Parmenides' view that such qualities are 'conventional': mortals have made up their minds to recognise them as appearing to sense, but they are not fully real. These Pythagoreans would, at any rate, abandon the old confusion of the void with the dark and cold air of night; and with that would go the generation of the physical world from a spark of fire or light progressively spreading to take in and limit 'the nearest part of the unlimited'. This kind of becoming or birth could also be surrendered as disproved by Parmenides. What remains is the primitive form of atomism : an indefinite number of indivisible magnitudes. Zeno's arguments do not seem to imply that the void was retained, in despite of Parmenides, for its old purpose of keeping the units distinct and of providing empty space for them to move into. The void reappears in Democritean Atomism ; but both Empedocles and Anaxagoras accepted Parmenides' denial of it.

Such being the position of the Pythagorean pluralists, we can trace two consequences of Zeno's attack. The first was reflected in the separation of arithmetic from geometry. Arithmetic (the theory of numbers) remained the field of discrete quantity. The arithmetical unit, 1, is essentially indivisible ; in Greek arithmetic a fraction, such as $\frac{1}{2}$ or $\frac{2}{3}$, does not stand for a part or parts of a unit, but for one unit in a group of two, or two units in a group of three. Every number is divisible into the units whose sum it is, but no farther. There is no such thing as an irrational number.[1] The series of numbers is unlimited in one direction only ; in the other it terminates in the first unit, 1. And, as we have seen (p. 2), even in the direction of 'the more', unlimitedness can be got rid of or mitigated by the doctrine that the number series really ends at 10 and then starts again in a sort of cyclical order. Geometry, on the other hand, becomes specially the field of continuous magnitude. Every actual magnitude is infinitely divisible : there is no 'least part' (*ἐλάχιστον*). Here also irrational and incommensurable quantities are admitted ; they are connected with the properties of spatial extension. A quantity such as $\sqrt{2}$ is not a number ; it is represented by the diagonal of a square figure ; and all propositions involving such quantities are treated by geometrical methods. Space becomes unlimited in both directions, 'the great and the small', although, as Aristotle insists, any actual magnitude must be limited externally. The exclusion of all irrationals from arithmetic made it possible for the doctrine that 'things are numbers' to survive, as it apparently did, the awkward discovery of quantities like $\sqrt{2}$.[2]

The second consequence of Zeno's criticisms was the distinction between the geometrical solid and the sensible body, which the Pythagoreans had confused. We find an early trace of this distinction in Aristotle's reference to Protagoras' attack on mathematics : 'Perceptible lines have not the properties of the lines of which geometers speak ; for no perceptible thing is straight or round in the sense in which they define these terms : a hoop touches a ruler not at a point but as Protagoras said [1] it did in his refutation of the geometers' (*Met.* 997*b*, 35). Protagoras was, no doubt, denying the existence of any such things as the mathematician's ideal straight lines or circles and pointing out that the roundest and straightest objects we actually perceive do not conform to his assumptions.[2] It is clear that by this time the fact that geometrical truths do not apply directly to physical bodies was coming to be realised. The atomists, Leucippus and Democritus, saw that, if physical bodies need not have all the properties of geometrical solids, they could elude Zeno's dilemmas. They could reply: 'We grant that all geometrical magnitudes are infinitely divisible and that a geometrical point has no parts or magnitude ; but our atoms are not either the points or the solids of geometry, but compact bodies, which, if they were large enough, you could see or touch. They are "solid" in another sense, impenetrably resistant to any attempt to split them, because they contain no void interstices.' For the term *στεϱεόν* applied to geometrical solids the atomists substituted the stronger word *ναστόν* 'stuffed full and compact'. The atom thus ceased to be confused with the unit of number and the point of geometry, and became a purely physical body whose essential property was impenetrability. It was 'full of being' in the grossest and most material manner. In this physical sense it retained the properties of the Pythagorean atom in so far as this was an indivisible unit having magnitude and position in space. It was thus possible for Aristotle to speak of the doctrine of Leucippus and Democritus as if it were a modification of the Pythagorean number-atomism. Their primary bodies were 'infinite in number and not divisible in magnitude. Generation is neither of many out of one nor of one out of many,[3] but consists entirely in the combination and entanglement of these bodies. For in a way these thinkers also say that things are numbers or consist of numbers' (*de caelo*, 303*a*, 3).

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[1] That irrationals are confined to geometry is repeatedly stated by Proclus on Euclid I, e.g. at p. 60, 7.

[1] This has been pointed out by Mrs. Markwick in the unpublished dissertation mentioned in the Preface.

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[1] ὥσπερ Πρωτ. ἔλεγεν. The imperf. is against the view (Frank, *Plat. u. d. sog. Pyth.*, 351) that the reference is to some dialogue in which Protagoras was a character.

[2] Cf. also Ar., *An. Post.* 76*b*, 39. Apelt, *Beiträge*, 261.

[3] Cf. *Met.* 1039*a*, 9 : 'Democritus rightly says that one cannot come out of two nor two out of one, for he identifies substances with the atoms. So it will be the same as with numbers : if, as some say, a number is a combination of units, either 2 will not be one or it will contain no actual units.' In the *Phaedo*, 96E, Socrates is represented as having been puzzled as to how one unit could 'become two' by being put together with another unit or by being split into two.

This final development of Atomism, however, was later than the dramatic date of Plato's *Parmenides*. We are now to imagine ourselves carried back to the middle of the fifth century before Leucippus and Democritus were heard of. Zeno has just brought to Athens for the first time that controversial treatise of whose contents and background some account has been given above.

THE PARMENIDES

In the series of Plato's writings the *Parmenides*, as is now generally agreed, stands with the *Theaetetus* between the middle group (*Meno, Phaedo, Symposium, Republic, Phaedrus*), and those later dialogues, *Sophist, Statesman, Timaeus, Philebus, Laws*, which are distinguished by a marked change of style.[1] Whether it was written before or after the *Theaetetus* or at the same time, Plato, as M. Diès remarks,[2] has left no doubt that it was meant to be read before the *Theaetetus*, which is itself linked to the *Sophist* and *Statesman*. The meeting of the young Socrates with Parmenides and Zeno is alluded to at *Theaet.* 183E, and again recalled in the *Sophist* (217C) in terms that can only refer to our dialogue. The *Parmenides* thus introduces the series of works in which Plato, for the first time, confronted his own characteristic doctrine with the chief systems of his predecessors, and submitted these to a critical examination. The greatest, in his estimation, was Parmenides. In the first part he allows Parmenides to bring objections against the theory of Forms. In the second part he subjects Parmenides' own premisses and conclusions to the most searching scrutiny.

126A–127A. THE INTRODUCTORY NARRATIVE

The whole dialogue is related by Cephalus of Clazomenae, a person otherwise unknown, to an unspecified audience. Cephalus has visited Athens to hear from Antiphon, Plato's half-brother, an account of a meeting between Socrates and the two Eleatics, Parmenides and Zeno. Antiphon is said to have learnt the conversation which took place at this meeting from Pythodorus, one of the generals sent by Athens to Sicily in 427 B.C. at the request of the Leontines. We learn from *Alcibiades* I, 119A, that Pythodorus and Callias had each paid Zeno a hundred *minae* for his instruction, and Plutarch (*Pericles*, 4) says that Pericles had heard Zeno discourse. There is thus independent evidence for Zeno's residence in Athens. Whether Pythodorus had ever really entertained

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[1] L. Campbell (*C.R.* x, 129 ff.) showed that the *Parmenides* is later than the *Republic* and *Phaedrus* by stylistic evidence, summarised by Lutoslawski, *Plato's Logic*, 138.

[2] *Parménide* (1923), p. xii.

Parmenides as well as Zeno is not known; the scene of a conversation which is not merely imaginary but impossible is no evidence for historical fact. Plato intends to submit that theory of Forms which he had already put into Socrates' mouth in the *Phaedo* to the criticism of Parmenides himself, whom he regarded as a much greater man than Zeno. At the latest date when Parmenides could have visited Athens Socrates would still be 'quite young', perhaps twenty. The meeting, accordingly, must be placed round about 450 B.C. For some reason Plato preferred not to cast the dialogue into straightforward dramatic form. He may have felt that the elaborate explanation of how it came to be handed down might help the reader to overlook the impossibility that a conversation even remotely resembling this one should ever have occurred. Even those scholars who ascribe the theory of Forms to Socrates cannot consistently hold that when Socrates was twenty that theory had already taken the shape it wears in the *Phaedo* on the day of his death, fifty years later.

The subject of the dialogue is, to last degree, prosaic; and it is written throughout in the plainest conversational style, as far removed as possible from the lyrical manner of its near neighbour, the *Phaedrus*. Even Parmenides' reference to the veteran chariot-horse in Ibycus' poem (137A) stands out like a single patch of colour on a grey background.

CEPHALUS

126. After leaving our home at Clazomenae we arrived at Athens and met Adeimantus and Glaucon in the marketplace. Adeimantus took my hand; Welcome, Cephalus, he said; if there is anything we can do for you here, you must let us know.

Well, I replied, I have come for that very purpose: there is something you and your brother can do for me.

Please tell us what it is.

B. What, I asked, was the name of your half-brother on the mother's side? I cannot remember. He was only a child, you know, when I was here before, and that is a long while ago now. His father's name was Pyrilampes, I think.

Yes; and his own is Antiphon. But why do you ask?

My companions here, I answered, are fellow-citizens of mine, deeply interested in philosophy. They have been told that Antiphon has been much in the company of someone
C. called Pythodorus, who was a friend of Zeno's, and that Pythodorus has related to him that conversation which Socrates once had with Zeno and Parmenides. Antiphon

126C. is said to have heard it so often that he can repeat it by heart.

That is true.

Well, said I, that is what we want—to hear that conversation.

There is no difficulty about that, he replied. Before he was grown up, Antiphon worked hard at getting that conversation by heart, though nowadays he takes after his grandfather of the same name and devotes most of his time to horses. If you like, let us go and see him. He has just gone home from here; his house is close by, in Melite.

127. So we set out to walk there. We found Antiphon at home, giving instructions to a smith about making a bit or something of the sort. When he had done with the man, and his brothers began to tell him what we had come for, he recognised me from his memory of my earlier visit and said he was glad to see me. We then asked him to repeat the conversation. At first he was reluctant; it was no easy matter, he said. However, he ended by telling us the whole story.

THE CONVERSATION

127A–D. *Antiphon repeats Pythodorus' account of the meeting*

127. According to Antiphon, then, this was Pythodorus' account.
Zeno and Parmenides once came to Athens for the Great
B. Panathenaea.[1] Parmenides was a man of distinguished
appearance. By that time he was well advanced in years,
with hair almost white; he may have been sixty-five.
Zeno was nearing forty, a tall and attractive figure. It was
said that he had been Parmenides' favourite. They were
C. staying with Pythodorus outside the walls in the Ceramicus.
Socrates and a few others[2] came there, anxious to hear
a reading of Zeno's treatise, which the two visitors had
brought for the first time to Athens. Socrates was then
quite young. Zeno himself read it to them; Parmenides
at the moment had gone out. The reading of the arguments
D. was very nearly over when Pythodorus himself came in,
accompanied by Parmenides and Aristoteles, the man who

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[1] The occasion when foreigners were most likely to be at Athens. It is used again to account for the visit of Timaeus and Hermocrates in the *Timaeus*.

[2] Reading ‹οὐ› πολλοὺς with Taylor and others. They cannot have been more than two, since the whole company were only seven (129D) after the arrival of Parmenides, Aristoteles, and Pythodorus.

127D. was afterwards one of the Thirty; so they heard only a small part of the treatise. Pythodorus himself, however, had heard it read by Zeno before.

127D–128E. *The contents and character of Zeno's treatise*

127D. When Zeno had finished, Socrates asked him to read once more the first hypothesis of the first argument.[1] He did so, and Socrates asked: What does this statement mean, E. Zeno? 'If things are many,' you say, 'they must be both like and unlike. But that is impossible: unlike things cannot be like, nor like things unlike.' That is what you say, isn't it?

Yes, replied Zeno.

And so, if unlike things cannot be like or like things unlike, it is also impossible that things should be a plurality; if many things did exist, they would have impossible attributes. Is this the precise purpose of your arguments—to maintain, against everything that is commonly said, that things are not a plurality? Do you regard every one of your arguments as evidence of exactly that conclusion, and so hold that, in each argument in your treatise, you are giving just one more proof that a plurality does not exist? 128. Is that what you mean, or am I understanding you wrongly?

No, said Zeno, you have quite rightly understood the purpose of the whole treatise.

I see, Parmenides, said Socrates, that Zeno's intention is to associate himself with you by means of his treatise no less intimately than by his personal attachment. In a way, his book states the same position as your own; only by varying the form he tries to delude us into thinking that his thesis is a different one. You assert, in your poem, that B. the All is one; and for this you advance admirable proofs. Zeno, for his part, asserts that it is not a plurality; and he too has many weighty proofs to bring forward. You assert unity, he asserts no plurality; each expresses himself in such a way that your arguments seem to have nothing in common, though really they come to very much the same thing. That is why your exposition and his seem to be rather over the heads of outsiders like ourselves.

Yes, Socrates, Zeno replied; but you have not quite C. seen the real character of my book. True, you are as quick as a Spartan hound to pick up the scent and follow the trail of the argument; but there is a point you have missed at

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[1] For the meaning of this phrase, see above, p. 57.

128C. the outset. The book makes no pretence of disguising from the public the fact that it was written with the purpose you describe, as if such deception were something to be proud of. What you have pointed out is only incidental; the book is in fact a sort of defence of Parmenides' argument against D. those who try to make fun of it by showing that his supposition, that there is a One, leads to many absurdities and contradictions. This book, then, is a retort against those who assert a plurality. It pays them back in the same coin with something to spare, and aims at showing that, on a thorough examination, their own supposition that there is a plurality leads to even more absurd consequences than the hypothesis of the One. It was written in that controversial spirit in my young days; and someone copied it surreptitiously, so that I had not even the chance to consider E. whether it should see the light or not. That is where you are mistaken, Socrates; you imagine it was inspired, not by a youthful eagerness for controversy, but by the more dispassionate aims of an older man; though, as I said, your description of it was not far wrong.

In the Introduction (chap. III) some account has been given of the form and contents of Zeno's work and of the Pythagorean pluralism against which it is supposed to have been aimed. Modern critics have cast doubt on Plato's account of it as a youthful essay in controversy which its author might have preferred to suppress.[1] They ask how Plato could have known Zeno's motives. Nor is it easy to see why Zeno himself should have brought the book to Athens, if he thought so lightly of its worth. On the other hand, Plato may be reporting a tradition he had heard from his friends in South Italy. The somewhat elaborate account of Zeno's purpose may have been given because the book was rare and little known in the Athens of Plato's time. At any rate, the view of the work as an essay in eristic controversy, implying as it does that its author did not take his own arguments seriously, fits in with Plato's other references to Zeno. Modern writers regard Zeno's arguments as subtle and profound and valid against the position he was attacking. But Plato seems to have thought of him as a mere sophist. At *Phaedrus* 261D, the 'Eleatic Palamedes' who 'can make the same things appear to his hearers to be both like and unlike, one and many, at rest and in motion', is classed as a controversialist (ἀντιλογικός) with the demagogue and the forensic orator, who can make the same action seem right or wrong as they please. All this is described as a rhetorical art of deception, ignorant of the truth and going in chase of mere belief. Neither Plato nor Aristotle treats Zeno as a serious philosopher or mathematician.[1] If Plato thought of him as an eristic, he was doing the best he could for him by suggesting (or reporting a tradition) that he might have been glad to disown his youthful essay.

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[1] Apelt (*Beiträge*, p. 59) conjectured that Plato was really describing, in this indirect manner, what had happened to the second part of the *Parmenides* itself. He imagines that this had not been intended for publication, but had got abroad by some indiscretion, and that Plato then, finding his hand forced, wrote the first part as an introduction. This idea is too far-fetched. No reader could be expected to divine an intention so obscurely indicated.

What Zeno meant by the terms 'like' and 'unlike' is uncertain. In Eleatic writings the word 'like' has two senses. (1) Parmenides (8, 22) says that his Being is indivisible because 'all alike', i.e. homogeneous, with no distinct parts.[2] (2) Melissus uses ὁμοῖον for 'the same in character at all times', 'unchanging'.[3] In frag. 7 he argues that 'if what is is changed (ἑτεροιοῦται), it cannot be alike (ὁμοῖον), but what was before must perish, and what was not must come to be. If, then, it should become different (ἑτεροῖον) by a hair in ten thousand years, in all time it will all perish'. Again in frag. 8, 'we seem to see hot become cold, hard become soft, etc., and all these things being changed (ἑτεροιοῦσθαι), and that what was is not at all like (ὁμοῖον) what is'. If we take the word in the former, Parmenidean, sense, it is easy to construct a Zenonian argument on these lines: If things are many, they must be both homogeneous and heterogeneous. For (1) each of them must be one, and what is one is homogeneous; therefore they are homogeneous. But (2) if they are many, they must be distinguishable, and therefore unlike one another; therefore they are heterogeneous.[4]

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[1] M. Diès (*Parménide*, pp. 14–19) discusses this question at length. He sees, both in Plato and in Aristotle, an intention to enhance the position of Parmenides at Zeno's expense, and infers that in certain circles, hostile to the Platonic Forms, Zeno was held in equal or even higher esteem.

[2] The same use occurs in the proof of the indivisibility of Being attributed to Parmenides by Porphyry, but more probably Zeno's, Simplic. 139, 27 ff.: 'Since it is everywhere alike (ὅμοιον), if divisible, it will be divisible everywhere alike (πάντῃ ὁμοίως).'

[3] Cf. Hes. *Erga*, 114, αἰεὶ πόδας καὶ χεῖρας ὁμοῖοι, for strength *unimpaired* by time.

[4] There may be an echo of this at MXG. 1, 4 (Melissus): ἓν δὲ ὂν ὅμοιον εἶναι πάντα· εἰ γὰρ ἀνόμοιον, πλείω ὄντα οὐκ ἂν ἔτι ἓν εἶναι, ἀλλὰ πολλά. A somewhat different argument is suggested by Proclus (IV, p. 146) who says that some hold that Zeno's argument is a paralogism: 'if things that are (ὄντα) are many, in so far as they are said to be many, presumably they differ from one another and to that extent are unlike; but in so far as they *are* they are alike, for they have being in common, and things which have some-

128E–130A. *Socrates offers the theory of separate Forms as explaining how one thing can have two contrary characters*

Zeno had reduced his opponents' thesis, that a plurality of things exists, to absurdity by a series of arguments, all of which had assumed that the same thing cannot have two contrary characters, be both like and unlike, both one and many, and so on. Socrates' reply is addressed only to this assumption. He says: If you distinguish the Forms, Likeness itself and Unlikeness itself, from the many things which are said to be like or unlike by virtue of partaking of those Forms, then there is every reason why things which are defined as just simply 'alike' and nothing else should not be also unlike; but there is no reason why concrete things, such as you and me, should not partake of both Forms and so have both contrary characters at once.

128E. I accept that, said Socrates, and I have no doubt it is as
you say. But tell me this. Do you not recognise that
129. there exists, just by itself, a Form of Likeness and again
another contrary Form, Unlikeness itself, and that of these
two Forms you and I and all the things we speak of as
'many' come to partake?[1] Also, that things which come
to partake of Likeness come to be alike in that respect
and just in so far as they do come to partake of it, and
those that come to partake of Unlikeness come to be unlike,
while those which come to partake of both come to be
both? Even if all things come to partake of both, contrary
as they are, and by having a share in both are at
once like and unlike one another, what is there surprising
B. in that? If one could point to things which are simply
'alike' or 'unlike' proving to be unlike or alike, that no
doubt would be a portent; but when things which have
a share in both are shown to have both characters, I see
nothing strange in that, Zeno; nor yet in a proof that all
things are one by having a share in unity and at the same
time many by sharing in plurality. But if anyone can
prove that what is simply Unity itself is many or that
C. Plurality itself is one, then I shall begin to be surprised.

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thing in common are alike'. But Proclus names no authority, and this interpretation may be based on the definition of τὸ ὅμοιον later in the *Parmenides* as τὸ ταὐτὸν πεπονθός, 139E.

[1] As in the *Phaedo*, μεταλαμβάνειν (μετάσχεσις, *Phaedo*, 101C, μετάληψις *Parm.* 131A, Aristotle, quoted below, p. 79) means *beginning* to partake when the thing *becomes* like (γίγνεσθαι), whereas μετέχειν is used of *having* a share and corresponds to *being* like (εἶναι). Μετέχειν and μεταλαμβάνειν are clearly distinguished again at 155E, 11–156A, 1.

129C. And so in all other cases: if the kinds or Forms them-
selves were shown to have these contrary characters among
themselves,[1] there would be good ground for astonishment;
but what is there surprising in someone pointing out that
I am one thing and also many? When he wants to show
that I am many things, he can say that my right side is a
different thing from my left, my front from my back, my
upper parts from my lower, since no doubt I do partake
of plurality. When he wants to prove that I am one thing,
D. he will say that I am one person among the seven of us,
since I partake also of unity. So both statements are true.
Accordingly, if anyone sets out to show about things of
this kind—sticks and stones, and so on—that the same
thing is many and one, we shall say that what he is proving
is that *something* is many and one, not that Unity is many
or that Plurality is one; he is not telling us anything
wonderful, but only what we should all admit. But, as I
said just now, if he begins by distinguishing the Forms
apart just by themselves—Likeness, for instance, and
E. Unlikeness, Plurality and Unity, Rest and Motion, and all
the rest—and then shows that these Forms among them-
selves can be combined with, or separated from, one
another, then, Zeno, I should be filled with admiration.
I am sure you have dealt with this subject very forcibly;
but, as I say, my admiration would be much greater if
anyone could show that these same perplexities are every-
where involved in the Forms themselves—among the
130. objects we apprehend in reflection, just as you and Par-
menides have shown them to be involved in the things we
see.

It is generally agreed that the theory of Forms here put forward is identical with the theory as stated earlier in the *Phaedo*. This will be summarised below. Considered as a reply to Zeno's dilemmas, it accuses him of overlooking the distinctions between:

(1) The Forms, Likeness itself, Unity itself, etc.;

(2) Things defined as just simply 'alike', 'one', etc., and nothing else (*αὐτὰ τὰ ὅμοια*);

(3) Concrete things which can share in two contrary Forms at the same time and may have many other characters as well ('you and I and all the things we call "many"').

As against Zeno's undiscriminating statement that 'the same things cannot be both like and unlike, both one and many, both at rest and in motion, etc.' Socrates asserts:

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[1] ἐν αὐτοῖς, in their own sphere, as distinct from the things that partake of them. Cf. ἐν ἑαυτοῖς, 129E, 2.

(3) that a concrete thing can have two contrary characters in so far as it partakes of two contrary Forms;

(2) that, if a thing is defined as just simply 'alike' or 'one' and has no other character at all, then it cannot, of course, have the contrary character. An instance would be 'Equals' (*αὐτὰ τὰ ἴσα*, *Phaedo*, 74C), as used in the axiom: If equals be added to equals, the wholes are equal. Here 'Equals' means quantities of which nothing is asserted except that they are simply 'equal'; and to say that such equals are unequal is a contradiction in terms and necessarily false.

(1) Of the Forms themselves Socrates says it would surprise him if it could be shown that (say) Unity itself (*ὃ ἔστιν ἕν, αὐτὸ τοῦτο* 129B, 7) 'can be combined with or separated from' Plurality itself or other Forms. What this means appears in the *Sophist*, 251C ff.[1] where this very question is raised and answered. Two Forms are said to 'combine' when they stand (eternally) in such a relation that their names can occur in a true affirmative statement of a certain type. Thus 'Motion exists' means that the Form Motion blends or combines with the Form Existence. Two Forms are 'separated' or disjoined in true negative statements of the type 'Motion is not Existence' or 'Motion is not Rest', which express the fact that the Forms in question are *different*, though they may not be incompatible (for Motion is compatible with Existence). There are also true negative statements which reflect the incompatibility of two Forms, e.g. 'Motion does not rest.' These various types are illustrated in the *Sophist*, and the conclusion is that some Forms combine with some others, other Forms are eternally disjoined.

In our passage this problem is left in obscurity, and the reader might carry away the false impression that Plato means that Forms cannot combine. This is due to the lack of some further distinctions. It would, as Socrates said, be a portent if things defined as 'simply alike' and nothing else were also unlike, or if Unity were simply the same thing as Plurality. But it does not follow that the Form, Unity itself, cannot in any sense be 'many'. It is part of the purpose of the second division of the dialogue to indicate that this Form (and all other Forms) must be many in the sense that innumerable true statements, affirmative and negative, can be made about Unity (or any other Form), besides the statement that Unity is one. But the fuller explanation of this fact is reserved for the *Sophist*. The present passage must be taken to mean that, whereas in earlier statements of the theory attention had been fixed on the relation of Forms to individual things, there is no less need to study the relations of Forms to one another in their own sphere and to face the implications of statements about Forms themselves. These consist entirely of Forms: for instance, 'Motion exists (partakes of Existence)', 'Motion is not (is different from) Rest', and so on.

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[1] As Proclus remarks, vol. iv, p. 210, and Simplicius, *Phys.* 101, 10.

Let us now return to the theory of Forms considered as undermining Zeno's conclusions. Socrates' criticism is not really fatal to some at least of Zeno's arguments. Zeno was discussing, not concrete visible things like 'you and me', but those point-units which the Pythagoreans treated as indivisible magnitudes. Moreover, some of his pairs of contraries, e.g. 'finite in number' and 'infinite in number', were contradictory characters. Unless there is some ambiguity in the terms employed, his proposition that 'the same set of things cannot be both finite and infinite in number' cannot be upset by suggesting that the things might have both characters by partaking of two contrary Forms. The criticism would have more force as directed against Parmenides, who had rejected the Pythagorean conception of the world as a harmony of opposites. The Pythagoreans had their Table of Opposites, including Limit and Unlimited, One and Many, At rest and In motion, and they had seen everywhere a combination of these opposites in things. Parmenides denied that opposites could be combined: what is one, limited, at rest, cannot also be many, unlimited, in motion. He chose the opposites in the 'column of goods', and rejected the other column. He had also denounced the popular or Heraclitean union of opposites: 'it is and it is not, the same and not the same'. It was, in fact, Parmenides, quite as much as Zeno, that had assumed all opposites to be not only contrary but contradictory. Zeno was loyally supporting his master. The Eleatic position can be treated as a single whole; and it included a denial of the reality of ordinary concrete things, which was based on the logical assumption that contraries cannot be combined. So in his last words above Socrates speaks of the perplexities which Zeno *and Parmenides* have shown to be involved in the *things we see*.

It is probable that Plato had in view, not so much Zeno's actual arguments as those of later eristics inspired by Zeno's dialectic. After the dramatic date of our dialogue difficulties had been raised about ordinary things having contrary characters or even more than one 'name'. The Stranger in the *Sophist* (251A) mentions young men and some of their elders who have taken to learning late in life, who object to our 'taking any given thing as one and yet speaking of it as many and by many names ', as when we say that a man is not merely a ' man ' but also ' good ' and any number of other things. They tell us that ' many things cannot be one nor one thing many '. The Stranger dismisses this theory of predication[1] with contempt, and turns from it, as Socrates turns in our passage, to consider the question whether Forms can combine among themselves. Similarly in the *Philebus* (14C) Socrates speaks of the paradox of one thing being many or many things one. When Protarchus asks if he means the question how one person can also be ' many who are contrary to one another ', both tall and short, heavy and light, and so on, Socrates brushes the suggestion aside as childish and no more a problem than one man having many limbs. What he does mean is the problems that arise from asserting unchanging and eternal unities (*μονάδες*) like Man, Ox, Good, Beautiful, and then conceiving each of these as distributed among innumerable things that come to be: does it then become many, or does it ' as a whole come to be, apart from itself, one and the same thing both in one and in many things at the same time ' ? The real difficulty, in fact, lies in the theory of Forms itself, as Parmenides will presently point out in our dialogue.

Aristotle, again (*Phys.* 185*b*, 26), speaks of fifth-century thinkers, later than Parmenides and Heracleitus, who were troubled about the danger of admitting that ' the same thing is both one and many ', if they should say, ' This man *is* white ' or ' *is* walking '. Some, like Lycophron, Gorgias' pupil, banished the word ' is ' altogether. Others substituted *λελεύκωται* for *λευκός ἐστι*. Ross (*ad loc.*) endorses as probable Apelt's argument that Antisthenes, the Megarians, and the Eretrians all attempted to dispense with the copulative ' is '. There may be a trace of such dubitations in Philoponus (*Phys.* 42, 9 ff.), who represents Zeno himself as arguing against a plurality of individuals, such as horses and men. ' His proof is as follows: Socrates, who you say is a unit (*ἑνάδα*) contributing to make up the plurality, is not only Socrates, but also pale, philosophic, pot-bellied, and snubnosed: and so the same man is both one and many. But the same man cannot be one and many; therefore Socrates cannot be one.' The same reasoning applies to other alleged units; and without a number of units there can be no plurality. ' And if what is must be either one or a plurality, and it has been proved that it is not a plurality because there are not a number of units, it must therefore be one.' Since the real Zeno could not have used Socrates as an illustration, it is conjectured that Philoponus was quoting from some dialogue in which Zeno figured.[1]

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[1] That it is a theory, not a ' denial ', of predication is pointed out in *Plato's Theory of Knowledge*, p. 254.

From the passages in the *Sophist* and the *Philebus* above cited, it appears that Plato regarded such 'childish' puzzles as disposed of by the theory of Forms as stated in the text before us. If they were being discussed by sophists in the late fifth century, Socrates himself may well have expressed an opinion on the subject. When he set out to define what Aristotle calls a 'universal', such as the Beautiful, he must often have had occasion to draw the distinction, frequently pointed out in the early dialogues, between the single character to be defined and the many things which have that character, as well as others: 'I am not asking for a list of beautiful things; I want to know what "beautiful" means. What is this single character which is present in all the things and which makes you call them beautiful?' That single character would, of course, exclude its contrary 'ugly': no one could say that 'the beautiful is ugly'. But the things which contained that character might also possess the character of ugliness; they might (as Protagoras would say) be beautiful to me, ugly to you. Socrates could draw that distinction, and perhaps must have drawn it, without going on to assert that the Beautiful itself has a separate existence, independent of the many things in which the character appears. He was not a metaphysician, but interested only in finding out what such terms meant. Aristotle states quite definitely that the further step was taken by Plato, who gave these characters an independent existence and called them Forms. The consequence of separating the Forms from individual things which nevertheless share the same character was that Plato was involved in those problems of participation which Parmenides will presently point out.

The separation (*χωρισμός*) of the Forms is explicitly effected in the *Phaedo*. If I may express dogmatically an opinion about a much disputed matter, I would say that in no earlier dialogue is there a single expression definitely implying that the common character (*εἶδος*) exists apart from the many things possessing it. But in the *Phaedo* this doctrine is skilfully led up to by a series of steps. It is entailed by the belief in Anamnesis. This is shown to involve the separate existence of a conscious and knowing soul, apart from the body and its senses, before birth—a conclusion which all parties to the discussion take as satisfactorily demonstrated, provided that the Forms exist. If a disembodied soul can know all reality and truth, the objects of its knowledge must exist apart from sensible things, for such knowledge cannot come to it through the senses at all. Thus Anamnesis, the separate existence of the soul before birth, and the separation of Forms from sensible things, all stand or fall together. The whole of the first part of the *Phaedo* is designed to lead the reader to this conclusion.

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[1] See Lee, *Zeno of Elea*, pp. 19, 27.

The Forms are first mentioned (65D) in the opening protreptic discourse, which begins by defining death as the deliverance of the soul from the body: 'to be dead means that the body has come to be separate from the soul apart by itself (*χωϱὶς αὐτὸ καθ' αὑτό*) and the soul separate from the body apart by itself (*χωϱὶς αὐτὴν καθ' αὑτήν*) '.[1] The senses are a hindrance to thought; the philosopher's soul, even in this life, will renounce them so far as possible and retire into itself to think. At this point the Forms are introduced. All that is said of them here is that objects such as Socrates sought to define with his friends, Justice itself, or Goodness itself, cannot be perceived by any of the senses, but are known by themselves in their purity (*αὐτὸ καθ' αὑτὸ εἰλικϱινές*) to thought by itself in its purity (*αὐτῇ καθ' αὑτὴν εἰλικϱινεῖ τῇ διανοίᾳ*). Any of Socrates' companions must have admitted that you cannot see Justice itself with your eyes, but can only think of it.

The Forms appear next in the demonstration of Anamnesis. Here the distinctions[2] are more clearly drawn between: (1) Equality itself, the definition of which we can know and which is 'something different over and above' all the sensible things which are spoken of as (roughly) equal; (2) Equals (*αὐτὰ τὰ ἴσα*), i.e. quantities defined as simply equal and nothing else: these 'equals' can never appear to be unequal, nor can Equality ever appear to be Inequality (74C); (3) Instances of Equality which are in sensible things (*τὰ ἐν τοῖς ξύλοις τε καὶ οἷς νυνδὴ ἐλέγομεν τοῖς ἴσοις*, 74D). These are always imperfect; they are described as 'in our perceptions' (*ἐν ταῖς αἰσθήσεσιν, τὰ ἐκ τῶν αἰσθήσεων ἴσα*, 75B); and they can appear equal to one person, not equal to another (74B). It is argued that, from the moment when we begin to use our senses, we judge of the imperfection of these perceptible instances by reference to our knowledge of perfect Equality, which we must therefore have acquired before birth. Thus it becomes plain that the separate existence of the soul before birth involves the separate existence of the objects of its knowledge.

This conclusion is reinforced by the final argument of the first part: that the soul, in contrast with the body, is invisible and has the divine function of ruling; probably therefore it is akin to the invisible and divine order of things and, like them, simple, indissoluble, and unchanging. 'The reality of whose existence we give an account in our questions and answers'—terms such as those which Socrates discussed with his friends—belong to the higher unseen order: each of them is simple (μονοειδές), by itself, always the same and never suffering any sort of change whatsoever. The many beautiful or equal things we perceive, on the other hand, are constantly changing in every respect and belong to the lower order, with the body whose senses perceive them (78D ff.).

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[1] Cf. 67D, *λύσις καὶ χωρισμὸς ψυχῆς ἀπὸ σώματος.*

[2] Precisely the distinctions which Socrates in the *Parmenides* accuses Zeno of ignoring, p. 70.

Thus Plato leads on the reader to see that the separate existence of a conscious immortal soul carries with it the separate existence of the Forms. Both doctrines are united in the theory of Anamnesis, which had first appeared in the *Meno*. A comparison of the *Phaedo* with the earlier dialogues bears out Aristotle's statement that it was Plato, not Socrates, who separated the Forms from things; and the *Apology* is witness that Socrates, who knew that he knew nothing about 'the things in Hades', did not affirm the pre-existence of the soul. The inference is that Plato arrived at both doctrines simultaneously, most likely as a result of a better acquaintance with Pythagoreanism, acquired on his first visit to South Italy.

Since the objections Parmenides will presently make are admittedly directed against the theory as stated in the *Phaedo*, it will be well here to summarise the passage where it is offered as an alternative to those physical explanations of 'becoming and perishing' which Socrates had rejected. Socrates lays down two premisses. (1) The first is the existence of the Forms: 'that there is such a thing as Beauty just by itself, Goodness, Tallness, and so on with all the rest' (100B). (2) The second concerns the relation of such Forms to individual things bearing their names. This premiss is stated in two ways.

> (*a*) 'If anything else is beautiful, besides Beauty itself, it is beautiful for no other reason than because it partakes of that Beauty' (100C).

The phrase 'for no other reason than because' (οὐδὲ δι' ἓν ἄλλο ἢ διότι) is ambiguous. 'Reason' might mean 'explanation' (a common use of αἰτία). The premiss will then assert that the statement 'This rose is beautiful' is equivalent to 'This rose partakes of Beauty': I can substitute that form of words and so explain the sense by paraphrase. But Plato seems to be speaking, not of the analysis of a statement, but of the corresponding fact. The theory will then assert that this fact consists of (1) a particular visible thing, this rose; (2) the Form, Beautiful or Beauty; and (3) what we should call a relation between the two expressed by 'is', for which we can substitute 'partakes of'. But once more we have, so far, only an explanation: the fact that this rose is beautiful is the same thing as the fact that this rose partakes of Beauty. We learn nothing about any *cause* which would bring that fact into existence. On either view we have only an analysis of a statement or of a fact, not a reason for the statement being true or a cause of the fact's existence.

(*b*) The second formulation seems, at first sight, to tell us more:

> 'What makes (*ποιεῖ*) the thing beautiful is (not having a gay colour or anything of that sort, but) nothing else than the presence of that other Beauty, or the sharing in it, or however it may be that it comes to be there.[1] For I stop short of making any assertion about that: I only assert that it is *by* Beauty that all beautiful things are beautiful' (*τῷ καλῷ πάντα τὰ καλὰ καλά*, 100D).

But again the word 'makes' is ambiguous. Does it mean that the thing's beauty simply *consists in* the presence either of the Form itself or of the character like that of the Form, as we say that the presence of a gay colour 'makes' the thing gay? Or does it mean that the Form, existing independently, *causes* the thing to be (or to become) beautiful by somehow imparting its own character to the thing? This is precisely the dilemma on which Socrates refuses to pronounce. The language might be expressly designed to leave it unsolved. 'Partaking' and 'sharing' mean no more than that many things can share, or have in common, the same relation to a single Form; that is so, whatever the relation may be. 'Presence' is the current, non-technical, term for the possession of any moral or physical quality. Thus Socrates says to Charmides, You ought to know what temperance is 'if you have temperance in you and are a temperate person' (*εἴ σοι πάρεστι σωφροσύνη καὶ εἶ σώφρων*, 158B). Again at *Lysis* 217D, when hair turns white in old age 'it becomes like the quality that is present—white by the presence of whiteness' (*οἷόνπερ τὸ παρόν, λευκοῦ παρουσίᾳ λευκαί*). No doubt, the real Socrates would use this expression; he could use it with no metaphysical implications. But here he will not commit himself to it or to any other phrase that might imply either that the Form was present in the thing or that it was not. He takes refuge in the instrumental dative: '*by* Beauty all beautiful things are beautiful'. If (as I suppose) Plato was aware that his own doctrine of separately existing Forms had never been maintained by Socrates, we might expect some embarrassment just here, where he has to speak, through Socrates' mouth, of the relation between Form and thing. Socrates had talked, like anyone else, of characters present in things. Plato has just propounded his own doctrine that Forms exist separately. This has already led to the distinction between the unique unchanging Form which is the object of thought (Equality itself) and the many changing instances which we perceive as immanent in things (*τὰ ἐν τοῖς ξύλοις ἴσα*). The distinction is clearly maintained in the argument which follows. Hence at this point he refuses to use any term implying the presence of the unique Form itself in many things. He may have been already feeling some uneasiness about the relations between the separate Form and the immanent character and setting such problems aside as not relevant to his present purpose.

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[1] Reading *οὐκ ἄλλο τι ποιεῖ αὐτὸ καλὸν ἢ ἡ ἐκείνου τοῦ καλοῦ εἴτε παρουσία εἴτε κοινωνία εἴτε ὅπῃ δὴ καὶ ὅπως προσγενομένου*. The *προσγενομένη* of all MSS. cannot be right The *Hipp. Maj.*, which seems to be based on our passage, indicates that it is the Form that *προσγίγνεται*: 289D *ἐπειδὰν προσγένηται ἐκεῖνο τὸ εἶδος*, 292D *τὸ καλὸν αὐτό, ὃ παντὶ ᾧ ἂν προσγένηται, ὑπάρχει ἐκείνῳ καλῷ εἶναι*. The genitive *προσγενομένου* may have been altered to agree with *παρουσία* and *κοινωνία*. The alternative is to read *προσαγορευομένη* (Wyttenbach). For our purpose the reading does not matter.

Some further illustrations are then given. It is 'by tallness' that tall persons are tall and taller ones taller; 10 exceeds 8 not 'by 2' but 'by maniness' (*πλήθει*) or 'because of maniness' (*διὰ τὸ πλῆθος*). In the whole argument no distinction is drawn between qualities and relations. Tallness is treated as if it were a quality like whiteness, inherent in the tall person, but with the peculiarity that he has it 'towards' or 'in comparison with' (*πρός*) the shortness of another person.[1]

Plato next draws clearly the distinction between the unique and unchanging Form, Tallness (*αὐτὸ τὸ μέγεθος*), and a particular tallness which is *in* the person.[2] This may be called an immanent character (*ἰδέα, μορφή*) or an instance of Tallness. It is, of course, only one of innumerable instances, and it is not exempt from all change. We are further told that the same person, Simmias, can possess two contrary characters at the same time—a tallness, as compared with the shortness in Socrates, and a shortness as compared with the tallness in Phaedo. This is the point which Socrates makes in the *Parmenides* against Zeno's assertion that the same things cannot have two contrary characters.

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[1] Both Plato and Aristotle speak of 'relative terms' or 'predicates', never of relations as subsisting *between* two terms. Hence they do not recognise change of relation as a distinct kind of change. Aristotle gives as the reason for there being no proper kind of change for the relative that a thing, without changing, can be now greater, now less, than another, if that other changes in *quantity* (*Met.* 1088*a*, 34). Similarly if A is now to the right, now to the left, of B, this is because either A or B has changed in *place* (locomotion).

[2] *Phaedo*, 102D, *τὸ ἐν ἡμῖν μέγεθος*. Cf. 103B, *οὔτε τὸ ἐν ἡμῖν (ἐναντίον) οὔτε τὸ ἐν τῇ φύσει*. *Parm.* 130B, *αὐτὴ ὁμοιότης χωρὶς ἧς ἡμεῖς ὁμοιότητος ἔχομεν.*

So far the theory has explained what is meant by statements such as ' this rose is beautiful ', or ' Simmias is tall '. Plato now turns to the explanation of becoming and change, in fulfilment of Socrates' opening remark : ' we need an explanation of becoming and ceasing to be in general ' (95E). The terms are carefully chosen to indicate this, including one term which is used nowhere else. Just as a thing's *being* beautiful is due to its *having a share* (μετέχειν) in Beauty, so its *becoming* beautiful means that it *comes to partake* of Beauty (μετασχεῖν, ingressive aorist, from which the noun μετάσχεσις, here only, is formed for ' acquiring a share ', 101C). As in the previous case we are given only an analysis of what is meant by ' Simmias becomes tall ' : he begins to partake of Tallness. This is a description of the same event in other words. Nothing is said as to any ' cause ', in our sense, which would make such an event take place as its effect.[1]

The next question is : what exactly happens when a thing, such as Simmias, loses one character and gains the opposite ? What is it that changes or comes into existence ? (1) The Forms themselves cannot, of course, come to be or perish or change : Shortness itself can never become Tallness. (2) Nor can the particular instance of shortness which is in Simmias change its nature and become a tallness. It must either retire and give place to the opposite character or perish. Later it appears that all ordinary qualities do in fact perish; the alternative of 'retirement' is included only to provide for the case of the soul, which by definition carries with it the character ' living ' and excludes death and destruction. (3) There is also the person who undergoes the change and remains the same all the time (102E). What happens in change, then, is that one immanent character perishes and its contrary comes to be in the subject of change. The new character is described as 'approaching' or 'invading' and ousting the contrary already in possession. These metaphors disguise the lack of any efficient cause. We have only an analysis of the factors involved in any change of quality, not a 'reason' why any actual change should ever occur, or a 'cause' which could bring it about. The only case where anything like a cause appears is that of fire and snow. Fire is always hot, snow always cold. When the heat in fire approaches snow, the snow will not admit hotness, but will perish together with its own coldness (103D). Since no change can occur to Forms and they cannot perish, this can refer only to a particular fire approaching a particular piece of snow. Socrates seems to be unaware that the only efficient cause of change he actually describes is a physical cause of precisely the kind which, in the account of his youthful experiences, he had rejected as unsatisfying.

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[1] This is rightly pointed out by Aristotle where he criticises this analysis, *de gen. et corr.* ii, 9. Matter and form are not enough to bring things into being without a source of motion. Some have thought the Forms adequate to account for coming-to-be. Thus Socrates in the *Phaedo* first blames everyone else for having no explanation of becoming, and then, after laying down the distinction between Forms and things that partake of them, tells us that ' while a thing is said to *be* (so and so) in virtue of the Form, it is said to *come-to-be* by virtue of *taking a share* (μετάληψιν = Plato's μετάσχεσιν) and to pass away by losing it (ἀποβολήν). So he regards Forms as causes (αἴτια) of coming-to-be.' Aristotle then objects that, if Forms are to be moving causes, why is their generating activity intermittent ? (No change can occur in them, which could make them operative at one time, and not at another.) Cf. the same criticism at *Met.* 991*b*, 3. It is true that Plato here indicates no efficient cause. Aristotle's suggestion that the Form might ' generate ' is probably based on *Tim.* 50C, where the Form is compared to the father, the recipient to the mother. But in the *Timaeus* the moving cause is, not the Form, but the Demiurge.

Such is the theory which Socrates offers as disposing of Zeno's assumption that the same things cannot have two contrary characters. If the 'things' in question are concrete sensible things, Socrates asserts, simply as an obvious fact, that the same person can be both tall and short as compared with different people. Also he can be one person and yet have many parts. This means that one concrete thing can possess at the same time two contrary characters, by virtue of partaking of two contrary Forms. No contradiction is necessarily involved.

Parmenides now proceeds to criticise the theory. He does not challenge the point which Socrates has made against Zeno; Plato evidently regards that as established. Nor does he as yet take up Socrates' suggestion that the mutual relations of Forms among themselves need further study; the second part of the dialogue will have a bearing on this question. Parmenides' criticisms here fall under three heads: (1) the extent of the world of separate Forms; (2) the problem of participation; (3) the danger that Forms, if separate, may be found to be unknowable by us.

Why does Plato choose Parmenides, among all the Presocratics, to criticise his own theory? He always speaks of Parmenides with more respect than he pays to any other philosopher. He looked upon himself as the successor of the man who had first drawn, however imperfectly, the distinction between an intelligible world of truth and reality and a sensible world of seeming and becoming. In *Rep.* V he had adopted, without acknowledgment, Parmenides' scheme distinguishing (1) the perfectly real and knowable, (2) the totally unreal and unknowable, and (3) between these two, a world of appearance, partaking both of being and of not being. But he could not follow Parmenides in rejecting, as wholly illusory, the third of these three Ways. The world of appearance must have some sort of being, and must therefore be somehow related to the world of true reality, which Plato has peopled with Forms. Parmenides is the obvious critic of this departure from the pure Eleatic doctrine. The objections here are such as he might have raised. (1) If there are to be many Forms instead of the one real Being, how many are there? On what principle does Plato decide that there is, or is not, a Form for any set of things with a common name? (2) If the world of Seeming has some ground in reality, what is the relation which holds the two worlds together? (3) If no intelligible account can be given of this relation, will not the real world be entirely cut off from the sensible, by a gulf which our knowledge cannot pass?

130A–E. *Parmenides criticises the theory of Forms.* (1) *What classes of things have Forms?*

130A. While Socrates was speaking, Pythodorus said he was expecting every moment that Parmenides and Zeno would be annoyed; but they listened very attentively and kept on exchanging glances and smiles in admiration of Socrates. When he ended, Parmenides expressed this feeling: Socrates, he said, your eagerness for discussion is admirable.
B. And now tell me: have you yourself drawn this distinction you speak of and separated apart on the one side Forms themselves and on the other the things that share in them? Do you believe that there is such a thing as Likeness itself apart from the likeness that we possess, and so on with Unity and Plurality and all the terms in Zeno's argument that you have just been listening to?

Certainly I do, said Socrates.

Here, as in the *Phaedo,* the distinction is quite clearly marked between (1) the separate Form; (2) the immanent character, 'the likeness that we have'; and (3) the concrete things which partake of, or share, the Form and contain the character.

The first class of terms, about which Socrates has no doubts, are such as those which had figured in Zeno's arguments: Likeness and Unlikeness, Unity and Plurality, Motion and Rest, etc. We are not to infer that this class contains only these contraries, however many they were. All the mathematical Forms, at least, would belong here. The similar list of 'common' terms at *Theaetetus,* 185, includes, with Being and Not-being, Likeness and Unlikeness, Sameness and Difference, Unity and Plurality, *Odd and Even and number in general.* To this class is next added (as in the *Theaetetus* and the *Phaedo*) the moral Forms.

130B. And also in cases like these, asked Parmenides : is there, for example, a Form of Rightness or of Beauty or of Goodness, and of all such things ?

Yes.

It has often been pointed out that Plato must have started by recognising the Forms of moral qualities, because these had been the main object of Socrates' inquiries. The claim of the mathematical Forms becomes prominent in the *Meno* and *Phaedo* with the doctrine of Anamnesis, since mathematical truth is pre-eminently recoverable by recollection. The mathematical sciences were the only sciences in the full sense, yielding exact truth about unchanging objects. Socrates' doubts begin only with the remaining classes.

130C. And again, a Form of Man, apart from ourselves and all other men like us—a Form of Man as something by itself? Or a Form of Fire or of Water ?

I have often been puzzled about those things, Parmenides, whether one should say that the same thing is true in their case or not.

The Forms of the species of living creatures and of the four elements do not appear in the early dialogues. The species (Man, Ox) figure in the *Philebus* (15A), and they are all contained in the intelligible Living Creature of the *Timaeus* (30C). The *Timaeus* also asserts Forms of the four elements (51B). The need for Forms of these products of divine workmanship, as they are called at *Sophist*, 266B, ' ourselves and all other living creatures and the elements of natural things, fire, water, and their kindred ', would become clear when the theory was applied to the philosophy of Nature. The real Socrates never so applied it. The *Phaedo* is probably true to fact in representing Socrates as giving up all hope of finding a really satisfactory explanation of the physical world before he turned from ' things ' to dialectical discussions. It is borne out by Aristotle's statement that Socrates did not concern himself with Nature as a whole.

130C. Are you also puzzled, Socrates, about cases that might be thought absurd, such as hair or mud or dirt or any other trivial and undignified objects ? Are you doubtful whether

130C. or not to assert that each of these has a separate Form
D. distinct from things like those we handle[1]?

Not at all, said Socrates; in these cases, the things are just the things we see; it would surely be too absurd to suppose that they have a Form. All the same, I have sometimes been troubled by a doubt whether what is true in one case may not be true in all. Then, when I have reached that point, I am driven to retreat, for fear of tumbling into a bottomless pit of nonsense. Anyhow, I get back to the things which we were just now speaking of as having Forms, and occupy my time with thinking about them.

E. That, replied Parmenides, is because you are still young, Socrates, and philosophy has not yet taken hold of you so firmly as I believe it will some day. You will not despise any of these objects then; but at present your youth makes you still pay attention to what the world will think.

Socrates' only expressed objection to Forms of this class is that it seems absurd to suppose Forms of such insignificant things. Parmenides rightly dismisses this objection as unphilosophical, but does not say that they must have Forms. The impression is left that the field of Forms had been too narrowly restricted; attention had been fixed on the moral and mathematical Forms, and the question what other Forms must be recognised had not been faced. If Socrates here stands for the Platonic Socrates of the early and middle dialogues, it is true that, all through these, the prevailing interest had been moral, religious, and political, not metaphysical. The moral Forms were by far the most prominent. The mathematical Forms had appeared in the theory of Anamnesis, but the chief point of that theory was to establish the pre-existence of the soul. It is only when the doctrine of Forms is applied to the explanation of 'the whole of Nature' that this question of their extent becomes a problem.[2] The *Parmenides* stands at the beginning of the later series in which Plato sets his own doctrine beside the main Presocratic systems and indicates where he agrees or disagrees with them. The series leads up to the cosmology of the *Timaeus*. Since nothing further is said about this matter in our dialogue, it is unnecessary to examine once more the difficulties of reconciling Aristotle's evidence with the Platonic writings.[1] Parmenides drops this question here and turns to the problem of participation, which arises when any Forms are credited with separate existence.

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[1] Diès' correction, *ὃν ἄλλο αὖ τῶν οἵων ἡμεῖς μεταχειρ.* (Cf. C, 1, *τῶν οἷοι ἡμεῖς ἐσμεν*), seems the best yet proposed.

[2] In *Plato's Theory of Knowledge*, p. 9, I have suggested that the difficulty arises from the double origin of the theory, in Socrates' search for the definition of terms and in the Pythagorean doctrine of the nature of things.

130E–131E. (2) *Objections to Participation.* (a) *A thing cannot contain either the Form as a whole or a part of it.*

Parmenides has reproduced (at 130B) the distinction drawn in the *Phaedo* between the separate and unique Form, Likeness itself, and the character of likeness ‘ which we have ’. He now refers to the analysis of becoming, according to which things become like or just or beautiful by ‘ receiving a share ’, or ‘ coming to partake ’ (*μεταλαμβάνειν*) of the Form in question. According to this metaphor, the immanent character is imagined as the ‘ share ’ or ‘ part ’ that falls to me, and is distinguished from the shares that fall to other people. How, then, is it related to the Form ?

130E. (*Parmenides continues*) However that may be, tell me this.
You say you hold that there exist certain Forms, of which
these other things come to partake and so to be called after
their names [2] : by coming to partake of Likeness or Large-
131. ness or Beauty or Justice, they become like or large or
beautiful or just ?

Certainly, said Socrates.

Then each thing that partakes receives as its share [3] either the Form as a whole or a part of it ? Or can there be any other way of partaking besides this ?

No, how could there be ?

Do you hold, then, that the Form as a whole, a single thing, is in each of the many, or how ?

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[1] An exact and unbiased review of Aristotle's evidence is given by Sir W. D. Ross, *Aristotle's Metaphysics*, vol. i, pp. xlv ff. If the digression in *Ep.* vii, 342A ff. is genuine, Plato in the last decade of his life recognised Forms not only of moral and mathematical terms and of living creatures and the elements, but of manufactured things (*σκευαστά*) and of all actions and passions (the meanings of verbs).

[2] *ὧν τάδε τὰ ἄλλα μεταλαμβάνοντα τὰς ἐπωνυμίας αὐτῶν ἴσχειν* quotes *Phaedo*, 102B, *καὶ τούτων τἆλλα μεταλαμβάνοντα αὐτῶν τούτων τὴν ἐπωνυμίαν ἴσχειν*, where the analysis of becoming and change begins. Since Plato mentions Beauty and Justice here and Goodness and Beauty at 134B (as at *Philebus* 15B, where the same problem is raised), Taylor is incorrect in stating that ‘ the criticism of Parmenides . . . is confined entirely to the “ forms ” of mathematics ’ (*Trans.* Introd., p. 18).

[3] The construction of *μεταλαμβάνειν* with the genitive of the share taken is unusual, but occurs at *Phaedrus* 248E, *ἀμείνονος μοίρας μεταλαμβάνειν*. The normal construction is the accus., *Apol.* 36B, *μεταλαβὼν τὸ πέμπτον μέρος τῶν ψήφων*. But *μέρους μεταλαμβάνειν* here can have no other meaning, and *μετέχειν* with the gen. is used in the same sense below, 131C.

131 Why should it not be in each,[1] Parmenides?

B. If so, a Form which is one and the same will be at the same time, as a whole, in a number of things which are separate, and consequently will be separate from itself.

No, it would not, replied Socrates, if it were like one and the same day, which is in many places at the same time and nevertheless is not separate from itself. Suppose any given Form is in them all at the same time as one and the same thing in that way.

I like the way you make out that one and the same thing is in many places at once, Socrates. You might as well spread a sail over a number of people and then say that the one sail as a whole was over them all. Don't you think that is a fair analogy?

C. Perhaps it is.

Then would the sail as a whole be over each man, or only a part over one, another part over another?

Only a part.

In that case, Socrates, the Forms themselves must be divisible into parts, and the things which have a share in them will have a part for their share.[2] Only a part of any given Form, and no longer the whole of it, will be in each thing.

Evidently, on that showing.

Are you, then, prepared to assert that we shall find the single Form actually being divided? Will it still be one?

Certainly not.

At this point the dilemma is completely stated. But Parmenides adds an illustration, taken from the *Phaedo*: Largeness, Equality, Smallness. The rest of the argument assumes that the instance of Largeness which falls to the share of a large thing is a 'part' of the Form in the sense of a bit into which the Form is cut up and which is consequently smaller than the Form Largeness. This is to understand 'part' and 'whole' in the most gross and material sense.

131C. No, for consider this. Suppose it is Largeness itself that
you are going to divide into parts, and that each of the many
D. large things is to be large by virtue of a part of Largeness

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[1] *ἓν εἶναι* MSS., but Schleiermacher's *ἐνεῖναι* is perhaps more natural. At 149C, 7, T and B[1] have *ἓν ἔστιν* for *ἔνεστιν* (B[2]); at 145D, 4, BT have *ἓν ἔσται* for *ἔνεσται*.

[2] *μέρους ἂν μετέχοι*. Again the genitive is abnormal; but cf. 133D, *ὁμοιώματα ὧν ἡμεῖς μετέχοντες*.

131D. which is smaller than Largeness itself. Will not that seem unreasonable ?

It will indeed.

And again, if it is Equality that a thing receives some small part of, will that part, which is less than Equality itself, make its possessor equal to something else ?

No, that is impossible.

Well,[1] take Smallness : is one of us to have a portion of Smallness, and is Smallness to be larger than that portion, which is a part of it ? On this supposition again Smallness itself will be larger, and anything to which the portion taken
E. is added will be smaller, and not larger, than it was before.

That cannot be so.

Well then, Socrates, how are the other things going to partake of your Forms, if they can partake of them neither in part nor as wholes ?

Really, said Socrates, it seems no easy matter to determine in any way.[2]

There is evidence that the immanence of Forms was discussed at the Academy.[3] Aristotle remarks that Forms can contribute nothing to the being of things unless they are in them ; they might in that case be regarded as causes ' in the same way as white is the cause of whiteness to the white thing by being mixed in it ; but this theory, first stated by Anaxagoras and later by Eudoxus and some others, is easily refuted ' (*Met.* A, 991*a*, 13). Alexander enumerates the objections from Aristotle's *περὶ ἰδεῶν* B (Frag. 189R) : (1) Forms would have to be bodies and also contrary to one another ; (2) either the whole Form or a part of it would have to be in each thing : if the whole, then what is numerically one would be in many things ; if a part, a man will contain only a part of the Form Man ; (3) Forms would be divisible ; (4) there would be many Forms, not one only, mixed in each thing; (5) Forms would not be models; (6) they would perish with the things in which they are mixed; and (7) they would not be exempt from motion. This criticism indicates that Eudoxus was conceiving participation in the same material way as Parmenides here. The terminology of the theory, which was borrowed from current speech, lent itself to such interpretation.[1] In the medical writers and the early philosophers 'the hot' (τὸ θερμόν), for example, is spoken of as if it were a material substance, a 'part' of which could be 'present in' a thing which would thus 'possess a share' of it. Eudoxus, apparently, proposed to understand participation in a Platonic Form, such as αὐτὸ τὸ καλόν or αὐτὸ τὸ μέγα in just this way. The objection raised by Parmenides is identical with one of Aristotle's; and our passage might be understood as Plato's own rejection of such a crude interpretation. Parmenides' examples, Large, Equal, and Small, bring out the absurdity of supposing that 'Largeness itself' (αὐτὸ τὸ μέγεθος) or 'the Large itself' (αὐτὸ τὸ μέγα) is a large *thing*, which could be divided into parts. Owing to the current use of language, it would be difficult for the ordinary Greek to realise that Largeness or 'the Large' was not itself large; it would have seemed to him a contradiction to say 'the Large itself is not large'. There is, in fact, an ambiguity in the expression αὐτὸ τὸ μέγα. It can mean, not the Form, but 'that which is simply large and nothing else', like Socrates 'αὐτὰ τὰ ὅμοια (129B) which meant 'things which are simply alike and nothing else'. As Socrates said, it would be contradiction to say that such things were unlike or not alike. Plato himself was aware of this ambiguity; and it will be part of the purpose of the second part to call attention to it.[2] The young Socrates, however, is not represented as capable of detecting it; though he will presently suggest a way of escape. Meanwhile Parmenides advances another objection, resting on the same false assumption that Largeness itself is a large thing.

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[1] Punctuate Ἀλλὰ τοῦ σμικροῦ . . . ἑαυτοῦ ὄντος ; as a question. As the text stands, ἀλλὰ could only introduce an alternative consequence of the previous supposition about τὸ ἴσον ; but it does not. This is a third supposition, τοῦ σμικροῦ standing first and carrying the emphasis, like αὐτὸ τὸ μέγεθος and τοῦ ἴσου in the previous speeches. Two consequences follow : (1) Smallness itself will be larger than the portion of it taken by the small thing, and (2) this portion taken from Smallness (τὸ ἀφαιρεθέν), though *added* to the thing, will not make it greater, but smaller than before. Proclus (v, p. 113) interprets correctly. So does M. Diès, but he prints the current punctuation, which will not yield the sense required.

[2] Aristotle's statement (*Met.* 987*b*, 13) that the Pythagoreans and Plato left the nature of ' participation ' or ' imitation ' an open question for discussion, has been taken to refer to this conclusion.

[3] Jaeger, *Aristoteles*, p. 16.

131E–132B. (*b*) *The Third Man*

131E. Again, there is another question.

What is that?

132. How do you feel about this? I imagine your ground for believing in a single Form in each case is this: when it seems to you that a number of things are large, there seems,

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[1] For illustrations, see H. C. Baldry, *Plato's 'technical terms'*, *C.Q.* xxxi (1937), pp. 141 ff.

[2] At 149D ff. the *Phaedo* theory, so far as Largeness, Smallness, and Equality are concerned, will be shown to lead to the impossible result that no quantity can be greater or smaller than another.

132A. I suppose, to be a certain single character[1] which is the same when you look at them all; hence you think that Largeness is a single thing.

True, he replied.

But now take Largeness itself and the other things which are large. Suppose you look at all these in the same way in your mind's eye, will not yet another unity make its appearance—a Largeness by virtue of which they all appear large?

So it would seem.

If so, a second Form of Largeness will present itself, over and above Largeness itself and the things that share in it; and again, covering all these, yet another, which will make
B. all of them large. So each of your Forms will no longer be one, but an indefinite number.

The argument here turns on the ambiguity above noted. It is assumed that the Form, Largeness itself, *has* the character in the same way that the many large things have it; in other words, that it is itself a large thing. If that is so, then it is just one more member of the class of large things, and there will be the same reason to demand a second Form for it to partake of as there was to demand the original Form for the many to partake of. Thus we shall get an infinite regress. Aristotle (*Met.* 990*b*, 15) observes that some of Plato's 'more precise arguments recognise Forms of relative terms which, we maintain, do not form an independent class; others state the argument of the Third Man'. Jackson and other critics have seen here a reference to our passage. The 'Third Man' seems to have been the title of several different arguments, which fall under two heads: (1) not involving an infinite regress, (2) involving an infinite regress (as here).

(1) Alexander (*ad loc.*) mentions an argument used by 'the Sophists'. When we say 'a man walks' we do not mean the Form Man (which cannot move) nor yet any particular man (for we do not know what man it is who is walking). It must, then, be some 'third man'. Alexander adds that those who separate the common predicate from the individuals, as do the assertors of Forms, give a handle to this sophistical argument. But, on the face of it, the argument seems to point out merely that, granted there is a Form Man, we can make statements not only about that Form and about one specified individual man, but also about 'a man' or 'some man' unspecified: 'some man stole my umbrella.' Stoic logic

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[1] ἰδέα here (as in the *Phaedo*) means the character supposed to be possessed both by the Form and by the things which partake of the Form.

recognised this type of ' indefinite proposition ' (ἀόριστον ἀξίωμα): ' someone (τις) is walking ' or ' he (ἐκεῖνος) is moving ' (Diog. L. vii, 70; Sext. *adv. log.* ii, 97). Evidently this is not the argument used by Parmenides. There is no infinite regress; and the ' third man ' is not an extra Form, but an unspecified individual.

There is also an argument attributed to Plato's contemporary, the sophist Polyxenus. ' If man exists by participation (κατὰ μετοχήν) or sharing (μετουσίαν) in the Form or Self-man, there must be some man who will have his being in relation to the Form (πρὸς τὴν ἰδέαν ἕξει τὸ εἶναι). But neither the Self-man, which *is* the Form, nor some particular man (ὁ τὶς ἄνθρωπος) can be by participation in the Form. Therefore it must be a third man.' The statement is obscure. Professor Taylor [1] connects this argument with one used by Aristotle (*Met.* 1059*b*, 2): Suppose that Forms do exist and that the objects of mathematics are to be placed (as they are by Plato) as a third class *between* Forms and perceptible things, why is there not a third man or horse between the Forms Man, Horse, and the individuals? Polyxenus' phrase ' some man who will have his being in relation to the Form ' might mean something of which all you know is that it is ' a man ', as in mathematics ' a circle ' means something that is simply a circle and nothing more; whereas any specified individual man has many other properties. If this is what Polyxenus meant, his argument comes to much the same thing as the previous one. The theory of Forms should recognise that ' a man ' means something distinct from the Form, Man, and from any specified concrete individual. In any case, it is clear that Polyxenus' argument is quite distinct from Parmenides' argument in our passage.[2] It cannot therefore be used as proof that Plato is reproducing criticisms of his own theory advanced by Megarians (Polyxenus was an associate of Bryson, who was a pupil of the Megarian Euclides [3]).

(2) The argument in our passage, involving an infinite regress, was also known as the ' Third Man '. It was restated by Aristotle as follows.[4] ' If a term truly predicated of a number of things actually exists in separation from the things it is predicated of—and that is what those who assert Forms believe they show, since their reason for the existence of a Self-man is that Man is truly predicated of a number of things and is a different " Man " from

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[1] *Mind*, 34 (1925), 355.

[2] As Taylor remarks, *Plato* (1926), p. 355.

[3] K. v. Fritz (Pauly-Wiss. Suppl. V, s.v. Megariker, 722), arguing that chronology is against Polyxenus being the pupil of Bryson, whose ἑταῖρος he is called in Plato, *Ep.* xiii, represents Polyxenus as the pupil of Euclides.

[4] In *Περὶ Ἰδεῶν A*, quoted by Alex. on *Met.* 990*b*, 15, p. 62, 33 (Ar., Frag. 188R): δείκνυται καὶ οὕτως ὁ τρίτος ἄνθρωπος . . .

the individual men—then there will be a third Man. For if the "Man" which is predicated is different from the things it is predicated of and has an independent existence, and if it is predicated both of the individuals and of the Form, there will be a third Man over and above the individuals and the Form. And similarly a fourth, predicated of this third and of the Form and the individuals, and a fifth, and so on indefinitely.' Again at *Met.* 1038*b*, 30, it is argued that 'the Third Man' (an infinite regress) will result from giving any universal term, like 'Animal', a substantial existence apart from particular animals.[1] Thus Aristotle simply repeats Parmenides' objection as valid against the separate existence of Forms.

Plato leaves the objection unanswered here. But elsewhere he uses a kindred argument to prove the opposite conclusion: that any Form must be unique. The divine creator made only one 'Bed', the essential Bed, which exists in reality. If he had made two, then there would make its appearance yet another one, whose character the first two would possess, and this third bed would be the essential Bed (*Rep.* 597C). This passage, as Apelt observed (*Beiträge*, 53), might be a refutation of the Third Man. If there were two Forms, Bed, they would be entities of the same order and exactly alike; and there might then be ground for requiring a third Form 'whose character they would both possess'. But the Form and the individual beds are not entities of the same order or exactly alike. The Form, Bed, is not *a* bed; and it is not true that it *has* the character in the same way that individual beds have it. Rather it *is* the character, and there is no ground for duplicating it. Similar reasoning establishes the uniqueness of the Form, Living Creature, in *Timaeus* 31A.

The refutation of the Third Man really requires what Socrates desiderated earlier—a study of statements made, not about individuals, but about Forms. Socrates is human, and we can also say 'Socrates is a man'; but if we can say 'Man is human', we cannot also say 'Man is a man'. The arguments in the *Republic* and the *Timaeus* indicate that Plato was not blind to the fallacy in Parmenides' assumption that Largeness is a large thing.

132B–C. *These objections cannot be met by making the Form a thought in a mind*

The young Socrates is not allowed to expose this fallacy. Instead, he offers the suggestion that the Form may, after all, not be an independently existing thing, but only a thought in a mind. As such, its unity could not be destroyed by its being distributed in 'parts' among individuals. To this suggestion Parmenides offers two objections, which should be kept distinct.

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[1] Cf. *Soph. El.* 178*b*, 36, where the Third Man regress is said to result from the false assumption that the common predicate 'Man' is an individual substance.

> 132B. But, Parmenides, said Socrates, may it not be that each of these Forms is a thought, which cannot properly exist anywhere but in a mind. In that way each of them can be one and the statements that have just been made would no longer be true of it.
>
> Then, is each Form one of these thoughts and yet a thought of nothing?
>
> No, that is impossible.
>
> So it is a thought of something?
>
> Yes.
>
> C. Of something that is, or of something that is not?
>
> Of something that is.
>
> In fact, of some *one* thing which that thought observes to cover all the cases, as being a certain single character?
>
> Yes.
>
> Then will not this thing that is thought of as being one and always the same in all cases be a Form?
>
> That again seems to follow.

Socrates' suggestion is one that may well have been made in discussions at the Academy. The word 'thought' is ambiguous; but the context makes it plain that 'thought' means an act of thinking, which can only occur 'in a mind' (ἐν ψυχαῖς), not necessarily a human mind. This phrase, again, implies that, if minds did not exist and think, there would be no Forms, for these are to be acts of a mind's thinking.

Parmenides' first objection is that an act of thinking must have an object, and this will be the single character (ἰδέα) observed as pervading a whole class of things. In so far as this character is one—and its unity is emphasised—it will be the same as the Form (εἶδος). The conclusion is that the Form is the object of thought, not the act of thinking. It follows that there is no ground for saying that it exists only in a mind and in this way denying its independent existence. In support of this conclusion it might be argued that an act of thinking must have some object and that object must have some content. If the content is different in each mind, no intercourse will be possible. If we are to understand one another, the same content or meaning must be before all our minds, though not, perhaps, with equal clearness. If it existed only in one mind, it would be inaccessible to all others.

Parmenides now adds a second objection.

132C. And besides, said Parmenides, according to the way in which you assert that the other things have a share in the Forms, must you not hold either that each of those things consists of thoughts, so that all things think, or else that they are thoughts which nevertheless do not think ?

That too is unreasonable, replied Socrates.

This objection is *ad hominem*, directed against Socrates' account of the way in which things have a share in Forms—the way that Parmenides has been criticising, according to which either the whole Form or a part of it would have to be in the thing. If Forms are acts of thinking, each thing will be composed of acts of thinking ; and either everything will think (not minds only), or there will be acts of thinking which do not think—a contradiction in terms. It may be noted that Plato's Parmenides repudiates the doctrine which some critics ascribe to the real Parmenides, that ' to think is the same thing as to be ' : τὸ γὰϱ αὐτὸ νοεῖν ἐστίν τε καὶ εἶναι (see above, p. 34).

Socrates abandons his suggestion. Some modern writers have not abandoned it, but have talked of the Forms as the ' thoughts of God ', as if they existed only in his mind. This ' God ' is to be the Demiurge of the *Timaeus*. But there is no warrant anywhere in Plato for saying that the Forms, which the Demiurge takes as his model, depend on his mind for their existence or are his acts of thinking ; still less for saying that the copies of the Forms in the sensible world are thoughts composing things. If any serious meaning can be found in such statements, it is not a meaning that we have the smallest right to attribute to Plato.

132C–133A. *Can the objections be met by making the Forms patterns of which there are likenesses in things ?*

Socrates now returns to his view that there are separate Forms, fixed in the nature of things or in reality (ἐν τῇ φύσει), a term which, as Proclus remarks, Plato often uses of the intelligible world. He now suggests that the relation of the Form to the immanent character may be that of pattern to copy. If ' participation ' means only the resemblance which a copy has to its original, we shall escape the difficulties entailed by the crude notion that the Form is a thing, all or parts of which might be in individuals. There may be any number of mirror images of the same object. Neither the object nor any part of it will be *in* the image or *in* the mirror ; but each image can reflect its whole character. May not the whole character of the Form be reproduced, on this analogy, in any number of individuals?

132C. (*Socrates continues.*) But, Parmenides, the best I can
D. make of the matter is this: that these Forms are as it
were patterns fixed in the nature of things; the other things
are made in their image and are likenesses[1]; and this
participation they come to have in the Forms is nothing
but their being made in their image.

Well, if a thing is made in the image of the Form, can that Form fail to be like the image of it, in so far as the image was made in its likeness? If a thing is like, must it not be like something that is like it?

It must.

And must not the thing which is like share with the thing
E. that is like it in one and the same thing (character)?[2]

Yes.

And will not that in which the like things share, so as to be alike, be just the Form itself that you spoke of?

Certainly.

If so, nothing can be like the Form, nor can the Form
be like anything. Otherwise a second Form will always
make its appearance over and above the first Form; and
133. if that second Form is like anything, yet a third; and
there will be no end to this emergence of fresh Forms, if
the Form is to be like the thing that partakes of it.

Quite true.

It follows that the other things do not partake of Forms by being like them; we must look for some other means by which they partake.

So it seems.

Parmenides' argument here is fallacious, as Plato must have been aware, for he did not give up speaking of Forms as patterns in the nature of the things. In the *Timaeus* the Demiurge takes Forms for his model, and later (52B) the copies of them are regarded as images (*εἰκόνες*) cast by the Forms themselves upon the Receptacle in which they appear. Proclus pointed out that the relation of copy to original is not *merely* one of likeness; the copy is derived from the original.[1] The reflection of my face in a glass is a copy of my face and like my face; my face is like the reflection, but not a copy of it. In the *Republic* the term 'image' (εἰκών) is used for a lower grade of existence. If we examine Socrates' statement carefully, we find that he suggests that things are likenesses (ὁμοιώματα) of Forms, being made in their image (ἐοικέναι), and that the relation called 'participation' is that of image to original (εἰκασθῆναι); he does not clearly assert that this relation is *merely* one of likeness. Parmenides then produces an argument to prove that the relation of likeness cannot be the same as the relation of participation, which Socrates has now identified with the relation of copy to original.

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[1] I have used the word 'image' (= *εἰκών*) in rendering *ἐοικέναι, εἰκασθέν*, and 'like' (*ὅμοιον*) where *ὁμοίωμα, ἀφωμοιώθη* occur, because two things may be alike without the one being an image or copy of the other. But Plato does not clearly mark this difference by his choice of terms, for *ὁμοίωμα, ἀφομοιοῦσθαι* usually mean 'copy' (image).

[2] *εἴδους* is omitted by Burnet and Diès, following Jackson.

The argument is this. If an image or copy is like the original, the original must be like the copy. (This is true.) But if one thing is like another, that means that they partake of the same Form, and this Form, it is clearly implied, will be the same as the Form of which the copies are copies: e.g. if all men are like one another, this *means* that they all partake of the Form, Man. This is not in agreement with Socrates' original statement (129A) that two things are alike when they partake of the Form *Likeness*. 'This man is like that man' is not equivalent to 'These men both partake of the Form, Man'. There is consequently no objection to saying that this man is like the Form, Man, and the Form is like him. This does not entail that the Form, Man, should partake, or be a copy, of itself or of a second Form, Man. We merely say that the Form, Man, partakes of the Form, Likeness. No infinite regress is involved so long as we do not identify the relation of Likeness with that of copy to original. There may be many similar photographs of the same person. They will be like one another, and the person will be like them. But they are all pictures of the person; they are not pictures of one another, nor is the person a picture of them. They would not all be like the person, if they were not all pictures of him; but you cannot argue that the person cannot be like the photographs unless he is himself a picture of a second person, and so on for ever.

The upshot is that the argument is fallacious, unless Socrates meant to assert that participation is the same thing as likeness, and it is not clear that he did mean that. The conclusion that the two relations are not identical is sound; but it is no reason against regarding the Form as a pattern of which the many individuals are copies. Plato must have seen this, because he continues to speak of Form and individuals in these terms.

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[1] Cf. Taylor, *Plato* (1926), p. 358. The same consideration underlies Asclepius' defence of Plato against this use of the Third Man, *Schol. in Met.* (Berl. Edit., vol. iv) 567*a*, 41.

Here the objections to 'participation' end. The conclusion seems to be that (1) participation is not to be understood in the gross material sense that a Form is a substance, *parts* of which are distributed among any number of things; (2) that the Form nevertheless has an independent existence and is not 'a thought in a mind'; and (3) that it can stand to the individual instances in a relation analogous to that of original to copy, which includes, but is not identical with, the relation of Likeness. The reader is left to discover the answers to Parmenides' objections; the young Socrates is represented as unable to meet them. He lacks that training in the detection of ambiguities which Parmenides will presently illustrate. It is naïve to conclude that Plato himself regarded the objections as seriously damaging his theory, although the nature of participation is undoubtedly obscure and hard for our imaginations to conceive.

133A–134E. (3) *Will not the separate Forms be unknowable by us?*

The final objection is that the separation of the Forms from their instances in things threatens to isolate them in a world of their own, inaccessible to our knowledge. Conversely the gods, if they belong to that other world, may be cut off from knowledge of the things in our world, and will not be, as the *Phaedo* (63C) declared, our masters.

133A. You see then, Socrates, said Parmenides, what great difficulties there are in asserting their existence as Forms just by themselves?

I do indeed.

I assure you, then, you have as yet hardly a notion of
B. how great they will be, if you are going to set up a single
Form for every distinction you make among things.

How so?

The worst difficulty will be this, though there are plenty
more. Suppose someone should say that the Forms, if
they are such as we are saying they must be, cannot even
be known. One could not convince him that he was
mistaken in that objection, unless he chanced to be a man
of wide experience and natural ability, and were willing to
follow one through a long and remote train of argument.
Otherwise there would be no way of convincing[1] a man
C. who maintained that the Forms were unknowable.

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[1] The reading *ἀπίθανος* is confirmed by the later reference to this remark at 135A, *ταῦτα λέγοντα . . . ὃ ἄρτι ἐλέγομεν, θαυμαστῶς ὡς δυσανάπειστον εἶναι.*

Parmenides clearly hints here that the following argument is not cogent; a man of sufficient intelligence could be brought to see the flaws in it. These are, in fact, not very hard to detect; and it is surprising that some commentators have overlooked this hint and taken the argument as really damaging.

133C. Why so, Parmenides?

Because, Socrates, I imagine that you or anyone else who asserts that each of them has a real being 'just by itself', would admit, to begin with, that no such real being exists in our world.

True; for how could it then be just by itself?

Very good, said Parmenides. And further, those Forms
which are what they are with reference to one another,
have their being in such references among themselves, not
with reference to those likenesses (or whatever we are to
D. call them) in our world, which we possess[1] and so come to
be called by their several names. And, on the other hand,
these things in our world which bear the same names as
the Forms are related among themselves, not to the Forms;
and all the names of that sort[2] that they bear have reference
to one another, not to the Forms.

How do you mean? asked Socrates.

Suppose, for instance, one of us is master or slave of
another; he is not, of course, the slave of Master itself,
the essential Master, nor, if he is a master, is he master of
E. Slave itself, the essential Slave, but, being a man, is master
or slave of another man; whereas Mastership itself is what
it is (mastership) of Slavery itself, and Slavery itself is
slavery to Mastership itself. The significance of things in
our world is not with reference to things in that other world,
nor have these their significance with reference to us; but,
as I say, the things in that world are what they are with
reference to one another and towards one another; and so
134. likewise are the things in our world. You see what I
mean?

Certainly I do.

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[1] Again (as at 131C) *μετέχειν* with genitive means 'have as our share'. Note that, in spite of the previous argument, 'likenesses' (*ὁμοιώματα*) is still used of the instances in our world.

[2] Relative names, such as 'master (of)', 'slave (of)', 'greater (than)', which require a correlative in the genitive (or dative) case to complete their significance: *Rep.* 438A, *ὅσα γ' ἐστὶ τοιαῦτα οἷα εἶναί του*, Ar., *Cat.* 6*a*, 36, *πρός τι τὰ τοιαῦτα λέγεται ὅσα αὐτὰ ἅπερ ἐστὶν ἑτέρων εἶναι λέγεται.* *Οὕτως* takes its meaning from the genitives *ἑαυτῶν, ἐκείνων* preceding.

134. And similarly Knowledge itself, the essence of Knowledge, will be knowledge of that Reality itself, the essentially real.

Certainly.

And again any given branch of Knowledge in itself will be knowledge of some department of real things as it is in itself, will it not ?

Yes.

Whereas the knowledge in our world will be knowledge of the reality in our world ; and it will follow again that each branch of knowledge in our world must be knowledge
B. of some department of things that exist in our world.

Necessarily.

But, as you admit, we do not possess the Forms themselves, nor can they exist in our world.

No.

And presumably the Forms, just as they are in themselves, are known by the Form of Knowledge itself ?

Yes.

The Form which we do not possess.

True.

Then, none of the Forms is known by us, since we have no part in Knowledge itself.

Apparently not.

So Beauty itself or Goodness itself and all the things we
C. take as Forms in themselves, are unknowable to us.

I am afraid that is so.

Then here is a still more formidable consequence for you to consider.

What is that ?

You will grant, I suppose, that if there is such a thing as a Form, Knowledge itself, it is much more perfect than the knowledge in our world ; and so with Beauty and all the rest.

Yes.

And if anything has part in this Knowledge itself, you would agree that a god has a better title than anyone else to possess the most perfect knowledge ?

Undoubtedly.

D. Then will the god, who possesses Knowledge itself, be able to know the things in our world ?

Why not ?

Because we have agreed that those Forms have no significance with reference to things in our world, nor have

134D. things in our world any significance with reference to them. Each set has it only among themselves.

Yes, we did.

Then if this most perfect Mastership and most perfect
Knowledge are in the god's world, the gods'[1] Mastership
E. can never be exercised over us, nor their Knowledge know
us or anything in our world. Just as we do not rule over
them by virtue of rule as it exists in our world and we know
nothing that is divine by our knowledge, so they, on the
same principle, being gods, are not our masters nor do they
know anything of human concerns.

But surely, said Socrates, an argument which would deprive the gods of knowledge, would be too strange.

Formally, at any rate, this argument is almost grossly fallacious. It confuses the Form (Mastership or Knowledge) with perfect instances of the Form. Mastership, the Form, has as its correlate the Form, Slavery; and we may say, in that sense, that it is '*Mastership* of Slavery itself', as Parmenides does say at 133E. But Mastership is not *the master* of Slavery or of anything else. It is the ideal or perfect master that is master of the ideal or perfect slave (*αὐτὸς δεσπότης, ὃ ἔστι δεσπότης, αὐτοῦ δούλου, ὃ ἔστι δοῦλος*, 133D). Every perfect master contains an instance of Mastership, but is obviously not identical with the unique Form, Mastership itself. In the concluding argument the gods are represented as ideal masters who *possess* (*ἔχειν* or *μετέχειν*) an instance of Mastership; clearly they are not the same thing as the Form; nor are they masters of the Form, Slavery itself: that is meaningless. So the argument breaks down, unless we grant that an ideal or perfect master cannot be master of imperfect slaves, like ourselves; and there seems to be no reason to grant that. Proclus (V, p. 194) points this out. It is true, he says, that Mastership itself and Slavery itself are correlatives. But we do say that the gods are our masters, so that mastership in the other world will have relationship with slavery in our world; and this is true, because we *partake* of Slavery itself.

There is the same confusion of the Form, Knowledge, with the perfect instance of knowing. Perfect knowledge, such as a god might possess, is a perfect instance of the activity called knowing, which can exist only in a mind. The Form itself is not an activity existing in a mind, and cannot know anything. Socrates, who has just been told that Forms cannot be acts of thinking in a mind, ought not to have accepted the suggestion at 134B: 'Presumably the Forms just as they are in themselves are known by the Form of Knowledge itself.' The confusion follows in the next sentences. 'We do not possess (ἔχομεν) the Form.' That is true; the Form does not exist in us. But for this the next sentence substitutes, 'we have no part in Knowledge itself' (αὐτῆς ἐπιστήμης οὐ μετέχομεν). If this means that we do not possess or contain perfect instances of knowledge, that is a different statement, which does not follow from the other. And even if it is true, there is nothing to show that we might not have imperfect knowledge of objects which are perfectly real. The whole Socratic and Platonic attempt to define Forms implies that we can start from imperfect knowledge of the Forms themselves and gradually improve that knowledge. The confusion comes out clearly in the second argument about the gods: 'if anything *has part in* (μετέχει) this Knowledge in itself, a god has the best claim to *possess* (ἔχειν) the most perfect knowledge' (134C). Here it is the god who possesses the most perfect instance of knowledge; it is in fact the god, not the Form, Knowledge, that knows the Forms. And, once more, there is nothing to show that the gods, besides having this knowledge of Forms, should not also have knowledge of our world.

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[1] Here (as at *Tim.* 71A, *εἰδότες . . . θεός*) Plato passes from the singular to the plural in the same sentence.

Another weak point is the assumption that, if there is a sharp line between the two worlds, 'we' are confined to the hither side of it. Our bodies certainly are; but, as the *Phaedo* argued, our souls are more akin to the unseen and intelligible. In the *Timaeus* (35A) the soul is compounded of both 'the indivisible and unchanging being' belonging to the Forms and 'the divisible existence which comes to be in the region of the bodily'. Thus souls are an intermediate order of existents, having a foot in both worlds and capable of knowing both.[1] As we have seen, Anamnesis involves the separate existence of Forms and the eternity of the soul which knows them. The doctrine expressly contradicts Parmenides' suggestion that the separation of the Forms cuts them off from our knowledge.

134E–135C. *The Forms are admitted to be necessary for all thought and discourse*

Parmenides himself has admitted that his last objection could be seen through and answered by a man of sufficient ability; and he now goes further and acknowledges that to deny the existence of the Forms is to destroy the possibility, not only of philosophy, but of all significant discourse.

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[1] Wilamowitz, *Platon*, ii, 227: *Der Einwand . . . schwindet, sobald die* φρόνησις *in der Seele göttlich ist, und sobald die Seele ein ewiges Wesen ist, also der Mensch auch in jenes Reich hineingehört.*

134E. And yet, Socrates, Parmenides went on, these difficulties
135. and many more besides are inevitably involved in the Forms,
if these characters of things really exist and one is going to
distinguish each Form as a thing just by itself. The result
is that the hearer is perplexed and inclined either to question
their existence, or to contend that, if they do exist, they
must certainly be unknowable by our human nature.
Moreover, there seems to be some weight in these objections,
and, as we were saying, it is extraordinarily difficult to
convert the objector. Only a man of exceptional gifts will
be able to see that a Form, or essence just by itself, does
B. exist in each case; and it will require someone still more
remarkable to discover it and to instruct another who has
thoroughly examined all these difficulties.

I admit that, Parmenides; I quite agree with what you are saying.

But on the other hand, Parmenides continued, if, in view
of all these difficulties and others like them, a man refuses
to admit that Forms of things exist or to distinguish a
definite Form in every case, he will have nothing on which
C. to fix his thought, so long as he will not allow that each
thing has a character which is always the same; and in so
doing he will completely destroy the significance of all
discourse. But of that consequence I think you are only
too well[1] aware.

True.

Parmenides here accepts the fundamental thesis of Plato's theory: Forms are necessary as objects on which to fix our thoughts and as constant meanings of the words used in all discourse. Otherwise, in any communication we shall not be thinking and speaking of the same things; and if the things change while we speak of them, our statements will not remain true. The Forms, therefore, must not be wholly immersed in the flow of sensible things. Somehow they must have an unchanging and independent existence, however hard it may be to conceive their relation to changing individuals.

Stallbaum first suggested that the objections brought by Parmenides against the theory of Forms had been formulated by

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[1] For this use of *μᾶλλον*, cf. *Phaedo*, 63D, *φησὶ θερμαίνεσθαι μᾶλλον διαλεγομένους*, 'people get too hot with talking'.

Megarian contemporaries of Plato.[1] The only external evidence alleged was the invention of the Third Man argument by Polyxenus, friend of the Megarian Bryson; but Professor Taylor has pointed out that this was not the argument involving indefinite regress used by Parmenides. Moreover, the general attitude of Parmenides towards the theory of Forms is not such as the Megarians could have taken up. As Taylor remarks, Parmenides ' does not quarrel with the young Socrates for believing in the separate and intelligible forms; on the contrary, he expressly declares that without such objects there can be no philosophy and no science, for there is nothing else that can be really known '. This admission could no more have been made by the Megarians than by the historic Parmenides; we are told that they adhered strictly to Eleatic monism. They would have been even more anxious to deny a plurality in the intelligible world than to object to giving the sensible world any but an illusory existence. Parmenides' tone is, on the whole, sympathetic. He seems desirous to help Socrates to a clearer statement of his doctrine; he does not pull it to pieces with captious and eristic criticisms. The difficulties are of the sort that must have been raised in discussions at the Academy itself; and we have independent evidence that Eudoxus had taken the crude materialistic view of participation. About the Megarians we know very little. The followers of Euclides soon gained a reputation for eristic, and they seem to have contributed nothing more important than some paradoxes which still provide logicians with amusement.[2] As Mr. Hardie [3] remarks, ' Burnet's suggestion of a personal and philosophical cleavage between Plato and the Megarics, and his view that the later dialogues represent a progressive " emancipation " from " Megaric doctrine ", are no more than conjecture.' The conjecture is certainly not borne out by the only personal mention of Euclides in the later dialogues. The introductory conversation of the *Theaetetus* presents him in a very favourable light and reads like a dedication of the work to an old and valued friend.

The belief that the Megarians had formulated the criticisms is bound up with a view of the dialogue as a whole which we shall see reason to reject. Briefly, this view is that the second part of the dialogue is a largely fallacious tissue of ' antinomies ' or contradictions, deduced by means of peculiarly Zenonian and Megarian logical methods. Professor Taylor[1] states the case as follows: 'If we assume that the objections brought by Parmenides against the doctrine expounded by Socrates did not originate with Plato himself, but are in substance a reproduction of criticisms on the teaching of dialogues like the *Phaedo* coming from an Eleatic quarter, we can understand why Plato, after stating them, should counter by saying in effect to his critics: "Turn the kind of logic you are accustomed to exercise upon me and my Socrates against your own fundamental tenet, and see how you like the result. The contradictions in which you think you have entangled me are nothing to those in which I can involve you by playing your own game with your own doctrine. I can easily do with you as Zeno did with the critics of his master Parmenides—give you back as good as you bring and better, in a way which will be highly diverting to a lover of dialectic."' Of the ostensible conclusion reached at the end of the dialogue Professor Taylor writes: 'It seems clear to me that by this enigmatic conclusion Plato is telling us as plainly as he can that the whole series of "antinomies" is a *parody* of a logic which is not his own.'[2]

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[1] Apelt, *Beiträge*, 45.

[2] A sober review of what is known or can be safely inferred about the Megarians is given in Prof. G. C. Field's *Plato and his Contemporaries*, pp. 169 ff.

[3] *A Study in Plato*, p. 107.

Against this hypothesis it may be urged that the logic used against Socrates in the first part is not Zenonian in form, except in so far as the first argument against participation contains a dilemma: 'Either the whole or a part of the Form must be in the thing.' Nor is there anything characteristically Zenonian or Megarian in such fallacies as we have detected. Further, the method employed in the second part differs radically (as we shall see) from Zeno's. Finally, if it appears that the second part is anything but a tissue of fallacious conclusions, the *tu quoque* view (as we may call it) falls to the ground. Leaving these questions in suspense, we must first consider what light is thrown on the relations of the two parts by the transitional passage which here follows.

135C–136E. *Transition to the second part. Parmenides' programme for an exercise in dialectic*

On the admitted assumption that Forms are a necessity for all thought and discourse, Parmenides now offers advice to Socrates as to how he should proceed. His mistake has been to attempt the definition of Forms, such as Beauty or Justice, without a preliminary exercise of a sort which Parmenides will presently illustrate.

135C. What are you going to do about philosophy, then? Where will you turn while the answers to these questions remain unknown?

I can see no way out at the present moment.

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[1] *The Parm. of Plato translated.* Introd., p. 10.

[2] *Ibid.*, p. 111.

> 135C. That is because you are undertaking to define ‘ Beautiful ’,
> ‘ Just ’, ‘ Good ’, and other particular Forms, too soon,
> D. before you have had a preliminary training. I noticed that
> the other day when I heard you talking here with Aristoteles.
> Believe me, there is something noble and inspired in your
> passion for argument ; but you must make an effort and
> submit yourself, while you are still young, to a severer
> training in what the world calls idle talk and condemns
> as useless.[1] Otherwise, the truth will escape you.

Why is a preliminary exercise necessary ? The suggestion is that, before setting out to define some particular Form, there is need to study the general assumptions involved in the assertion that such a Form exists and can be defined. Take, for instance, ‘ the Beautiful just by itself ’. What does that phrase mean ? We have already noted (p. 87) one ambiguity : it may mean either the Form, Beauty, or something defined as having the character of that Form and no other, ‘ that which is simply beautiful and nothing else ’. The Form, Equality, is distinguishable from ‘ equals ’ (*αὐτὰ τὰ ἴσα*), quantities defined as simply equal. What we seek to define is the Form. This is certainly one thing, a unity. But it can be defined only in terms of other Forms, which appear to be *parts* of the meaning defined. If so, that meaning is, in some way, a whole of parts ; not a bare unity, but a one which is also many. The whole task of definition is to discover and enumerate those parts. The ‘ Division ’ of a generic Form into its proper parts is a method of reaching definitions that has already been announced in the *Phaedrus* and will be lavishly illustrated in the *Sophist* and the *Statesman*. Hence, before defining any particular Form, we need to consider what definition involves : how a single Form is related to its many parts, and to other Forms which are not parts of it, but wholly excluded by it.

The historic Socrates had spent his time defining just such Forms as are mentioned here : Beauty, Justice, Goodness. He had not, as I believe, raised the preliminary questions : Have these Forms a separate existence, and in what ways can one Form be related to others ? The same is true of Plato’s own early dialogues, in which he had followed the Socratic procedure and tried to define Courage, Temperance, and so on. Then, in the

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[1] Isocrates in particular condemned Socratic discussion as *ἀδολεσχία καὶ μικρολογία* (xiii, *κ. σοφ* ., 18), and applied the same terms to the studies of the Academy, as useless for practical life (xv, *ἀντιδ.*, 262.). Plato defiantly adopts the word to describe his own procedure. Parmenides is not recommending a training in eristic sophistry.

Phaedo, he had clearly asserted separate existence, as the young Socrates does at the outset of our dialogue. But Socrates here has been represented as never having considered whether the problem of the one and the many is not everywhere involved in the world of Forms just as much as in the things we see. His words might imply that he thinks of each Form as 'apart just by itself' in the sense that it is entirely isolated from every other Form. He would much admire anyone who could show that the Forms 'among themselves' can combine or be separated in affirmative and negative statements. Since every definition is a statement about a Form entirely in terms of other Forms, we may suspect that the preliminary exercise needed before any definition is undertaken will have some bearing on that question of the relation of Forms among themselves. Parmenides seems to mean that Socrates' inability to meet his criticisms is due to his neglect of these previous questions. He now indicates the programme for the preliminary exercise. The form of argument will have some resemblance to Zeno's, but with important modifications.

135D. What form, then, should this exercise take, Parmenides?

The form that Zeno used in the treatise you have been listening to. With this exception: there was one thing
E. you said to him which impressed me very much: you would not allow the survey to be confined to visible things or to range only over that field; it was to extend to those objects which are specially apprehended by discourse and can be regarded as Forms.

Yes, because in that other field there seems to be no difficulty about showing that things are both like and unlike and have any other character you please.

You are right. But there is one thing more you must do. If you want to be thoroughly exercised, you must not merely make the supposition that such and such a
136. thing *is* and then consider the consequences; you must also take the supposition that that same thing *is not*.

How do you mean?

Take, if you like, the supposition that Zeno made: '*If there is a plurality of things*'. You must consider what consequences must follow both for those many things with reference to one another and to the One, and also for the One with reference to itself and to the many. Then again, on the supposition that *there is not a plurality*, you must consider what will follow both for the One and for the many,
B. with reference to themselves and to each other. Or, once

136B. more, if you suppose that 'Likeness exists', or 'does not exist', what will follow on either supposition both for the terms supposed and for other things, with reference to themselves and to each other. And so again with Unlikeness, Motion and Rest, Coming-to-be and Perishing, and Being and Not-being themselves. In a word, whenever you suppose that anything whatsoever exists or does not exist or has any other character, you ought to consider the
C. consequences with reference to itself and to any one of the other things that you may select, or several of them, or all of them together; and again you must study these others with reference both to one another and to any one thing you may select, whether you have assumed the thing to exist or not to exist, if you are really going to make out the truth after a complete course of discipline.

There would be no end to such an undertaking, Parmenides; and I don't altogether understand. Why not enlighten me by illustrating the method on some supposition of your own choice?

D. That is a heavy task, Socrates, to lay on a man of my age.

But you, Zeno, said Socrates; why don't you give us the illustration?

Zeno laughed and replied: Let us beg Parmenides himself to do it, Socrates. What he means is no light matter, I am afraid. You must see what a task you are setting. If we were a larger company, it would not be fair to ask him. Such a discourse would be unsuitable before a large audience,
E. particularly in a man of his age; because most people are unaware that you cannot hit upon truth and gain understanding without ranging in this way over the whole field. So, Parmenides, I join with Socrates in his request, in the hope of sitting at your feet again myself after all these years.

The procedure is to resemble Zeno's in so far as it takes an hypothesis such as 'that x exists' and deduces the consequences. But here the resemblance ends. Parmenides adds two qualifications. He admits that Socrates' theory has disposed of Zeno's difficulty about individual things having contrary characters. The scope is not to be confined to sensible things, but extended to the Forms, which Parmenides himself has recognised as necessary. It is evidently implied that what is to follow will have some bearing upon the mutual relations of Forms. The second modification transforms Zeno's method into a procedure of a quite different type.

Zeno had taken his opponents' hypothesis, and by means of a dilemma deduced conclusions which he assumed to be contradictory. The method was controversial, leading to a purely negative result. Parmenides, on the other hand, requires Socrates to consider the consequences, not only of affirming, but of denying the hypothesis. This means that the procedure either ceases to be controversial or, as controversy, becomes ineffective. If you study the consequences both of affirming and of denying an hypothesis, you look at the question from both sides and the natural result will not be purely negative: either the affirmation or the denial should be established. If the method is to remain controversial and you are to reduce both affirmation and denial to absurdity, your opponent will be unscathed. This consideration has a bearing on the *tu quoque* view of the dialogue. According to Professor Taylor, Plato's reply to his Megarian critics takes this form: 'It is retorted that their own doctrine is in a worse case still, for the application of the same logic to it shows that its denial is as self-refuting as its assertion, and that either leads to scepticism.' The last words refer to the ostensible conclusion of the whole argument at 166c: that whether you assume the existence or the nonexistence of a One, everything can equally well be affirmed or denied of it and of everything else. Apart from the fact that this conclusion is only ostensible and does not really follow, it would not, if it did follow, demonstrate that Monism is in a worse case than the theory of Forms. Suppose you are a Protestant, and a Catholic friend, using the scholastic method of argument, proves that your protestant doctrine leads to absurdity. You leave the proof unanswered. Your only retort is that, by parodying the scholastic method, you can show that, whether God be assumed to exist or not to exist, every peculiarly Catholic doctrine is both true and false. Your friend will hardly admit that this leaves Catholicism in a worse case. He will reply that there must be something very wrong with the use you make of what you call his scholastic method. I cannot believe that Plato's reply to Megarian critics could be: 'You criticise my theory; I cannot answer your criticism directly; but I can show (with a certain amount of fallacious reasoning, no worse than yours) that the *denial* of your fundamental doctrine leads to scepticism just as much as the affirmation of it.' There is this much truth in the *tu quoque* theory, that many of the arguments developed in the second part criticise Parmenides' own doctrine of the One Being. But some of them apply also to the theory of Forms, as the context here leads us to expect. It is Socrates that is said to need this preliminary gymnastic and to have got into difficulties for lack of it.

That the ostensible conclusion of the whole series of arguments (at 166c) does not really follow should be clear to every careful reader. Parmenides has said that the method might be applied to anything whose existence one may choose to assume. He will take, for purposes of illustration, his own hypothesis: the existence of a One. We are to study the consequences both of affirming and of denying this, both for the One and for the 'others'. In accordance with this programme we should expect to find in the sequel four deductions: (*A*) If the One is, what follows (*a*) for the One, (*b*) for the Others; (*B*) If the One is not, what follows (*a*) for the One, (*b*) for the Others? But there are in fact eight (or, as some think, nine) deductions. The reason is that the hypothesis is taken in more than one sense; for instance, the One in Hypothesis I is not the same thing as the One in Hypothesis II. This has been obvious to all commentators, ancient and modern. In Hypothesis I 'the One' is a bare unity which excludes all plurality and is not a whole of parts. The consequences deduced are purely negative: nothing whatever can be truly asserted of such a One. In Hypothesis II the One is a One which, besides having unity, has being, and is a whole of parts. It is shown that a long string of contrary characters can be truly ascribed to this entity from various points of view. But the ostensible conclusion: 'Whether there is or is not a One, both that One and the Others alike are and appear to be, and are not and do not appear to be, all manner of things', completely ignores the ambiguity. These apparent 'contradictions' have been deduced from at least two different meanings of 'the One'. We shall find, moreover, that the same form of words, 'if there is (*or* is not) a One' is explicitly defined not only in two but in several more senses. If we observe the distinctions which Plato himself indicates, nearly all the apparent fallacies and sophisms vanish, and with them the apparent contradictions. The upshot of the whole cannot, therefore, be a demonstration that the Eleatic hypothesis leads to complete scepticism.

We must note, then, that there is an important discrepancy between the programme here outlined by Parmenides and the procedure actually followed. So far we are led to expect no more than four Hypotheses; there will actually be eight. The explanation must be that Plato does not want to call attention beforehand to the ambiguity of the supposition, 'there is a One'. We are to find that out as we proceed and to draw for ourselves the necessary inferences.

136E–137C. *Parmenides offers to demonstrate the consequences of supposing that there is, or is not, a One*

136E. After these words from Zeno, Pythodorus joined with
Aristoteles and the rest in begging Parmenides not to disap-
point them,[1] but to demonstrate the method he had in mind.
Parmenides replied: I cannot refuse, although I feel like
the old race-horse in Ibycus, who trembles at the start of
137. the chariot-race, knowing from long experience what is in
store for him. The poet compares his own reluctance on
finding himself, so late in life, forced into the lists of love;
and my memories too make me frightened of setting out, at
my age, to traverse so vast and hazardous a sea. However,
I must do as you wish; for after all, as Zeno says, we are
all friends here. Where shall we begin, then?[2] What
B. supposition shall we start with? Would you like me, since
we are committed to play out this laborious game, to begin
with myself and my own original supposition? Shall I
take the One itself and consider the consequences of assum-
ing that there is, or is not, a One?[3]

By all means, said Zeno.

Then who will answer the questions I shall put? Shall it be the youngest? He will be likely to give the least trouble and to be the most ready to say what he thinks; and I shall get a moment's rest while he is answering.

C. The youngest means me, Parmenides, said Aristoteles; and I am ready. Put your questions and I will answer them.

Parmenides' reason for choosing the youngest to act as respondent is significant. He will be 'the least likely to give trouble' or to raise awkward objections. Socrates, young as he was, would certainly have been experienced enough in argument to detect the ambiguities of the hypothesis and to challenge many superficially questionable inferences. Aristoteles, from beginning to end, raises not a single objection; now and then he asks for an explanation, but otherwise he says Yes or No as required.[1] It has been noticed that from this point onwards the narrative form is abandoned and not a single name is mentioned. The dialogue becomes dramatic in form, and the speakers might as well be labelled A and B. The result is utterly unlike a Socratic conversation, in which the chief speaker leads on his respondent, eliciting his opinions, securing his assent to each step, and removing his doubts and difficulties. It may be Plato's intention to point the contrast between Eleatic procedure and what he and Socrates understood by 'dialectic', the art of philosophic conversation in a co-operative search for truth.

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[1] *μὴ ἄλλως ποίει*, 'stop behaving otherwise', is used to reinforce a positive request which has been met with some reluctance. Cf. *Rep.* 328B, *μένετε καὶ μὴ ἄλλως ποιεῖτε* (Adam's note); 338A.

[2] Did Plato recall Parm., frag. 5 [3], *ξυνὸν δέ μοί ἐστιν, ὁππόθεν ἄρξωμαι· τόθι γὰρ πάλιν ἵξομαι αὖθις?*

[3] Reading *εἴτε ἓν ἔστιν* and either *εἴτε μή [ἕν]* or *εἴτε μὴ ἔστιν*, (M. Wundt, *Platons Parmenides* (1935), p. 6). Cf. Procl., iv, 12, *βούλεσθε, ἔφη (Παρμ.), τὸ ἓν ὑποθώμεθα τὸ ἐμὸν εἴτε ἔστιν, εἴτε μή· τίνα τε αὐτῷ ἕπεται. . . .* None of the Hypotheses starts from the assumption that the One is *not one* (*μὴ ἕν*).

Since Aristoteles contributes nothing, nothing is gained by casting the arguments into the form of question and answer. The convention becomes tiresome and cumbrous; it only increases the difficulty of following the reasoning. I have accordingly dropped it in the translation. Aristoteles will appear only on a few occasions where his assent is tinged with a suggestion of doubt. By comparing a page of my version with any literal translation the reader can convince himself that this change of form in no way falsifies the sense.

THE DIALECTICAL EXERCISE

Principles of Interpretation.—The key to the understanding of the second part must be sought in the unmistakable ambiguity of the hypothesis, 'If there is a One'. Had Plato's intention been solely to turn the Zenonian method of argument against the Eleatic thesis, he would naturally have formulated that thesis once for all in Parmenidean terms and deduced contradictory results by shifting, within the limits of the same deduction, from one sense it might bear to another. But in fact he distinguishes in Hypotheses I and II two different senses and keeps them apart. The consequences deduced in each case do actually follow, and they are of course different. It is true that Parmenides can be held responsible for both senses, because he had confused them. Some of the attributes he had deduced for his One Being follow from supposing it to be a bare Unity that is one in every sense and in no sense many;

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[1] The persistent notion that Aristoteles is a mask for the young Aristotle seems to me fantastic. It is quite probable that the *Parmenides* was written before Aristotle joined the Academy in 367 or 366 B.C. at about the age of seventeen. His early writings indicate that for years afterwards he was, as we should expect, a faithful adherent of the theory of Forms, under the overwhelming influence of his master. The objections to the theory in our dialogue are advanced by Parmenides, not by Aristoteles, who has nothing to say for himself. And of all Plato's own pupils Aristotle would have been the least likely to give no trouble.

others from supposing it to be a One which is a whole of parts. Plato separates the two assumptions, and by adhering strictly to each in turn shows that they lead to opposite conclusions. The method of argument has some resemblance to Zeno's where (as in Hyp. II) it is shown that 'the One' has pairs of contrary attributes. But, unlike Zeno, Plato usually indicates clearly enough where he is passing from one to another sense or aspect of 'the One' or of 'the Others'. If we attend to these indications, the apparent contradictions disappear.[1] Grote said of the terms 'One' and 'Being' that, whereas Aristotle declared them to be not univocal, 'Plato neither notices nor discriminates their multifarious and fluctuating significations . . . The purpose of the Platonic Parmenides is to propound difficulties, while that of Aristotle is, not merely to propound, but also to assist in clearing them up.' Mr. Waddell (p. 111) replies that 'this is true only in a sense. He [Plato] is not explicit, as we have learnt to count explicitness; but he sees, and means us to see, much both of the different senses of the words and of the results of the inquiry.'

So much can be established by an examination of the arguments in detail. It is a natural inference that a main purpose of the whole exercise must be to point out that even the apparently simplest terms, such as 'one' and 'being', which will appear at the threshold of any metaphysical discussion, are dangerously ambiguous.[2] This point is relevant not only to the criticism of Parmenides' system but equally to the preliminary training of the young Socrates. Until he has cleared up these ambiguities, he should not set about defining particular Forms, or even assert that such unities exist. The Forms, Unity itself and Existence itself, and all other Forms, are each a 'one being', and it is vital to settle beforehand the question whether, and in what senses, their unity is compatible with plurality. This involves the problem which Socrates wished to be discussed: the relations of Forms among themselves.

It was from the *Parmenides* and from countless discussions to which it must have given rise that Aristotle learnt the maxim he so often repeats: 'One' and 'being' are used in many senses (τὸ ἓν καὶ τὸ ὂν πολλαχῶς λέγεται). But whereas Aristotle as a rule sets out with a systematic enumeration of the meanings of ambiguous terms, Plato makes his point by an indirect procedure. Faithful to Socrates, he would rather make us think for ourselves than tell us what to think. So he confronts his students here with a problematical exposition which may well have baffled the intelligence of those who were less acute than Aristotle himself. Different hypotheses are expressed in the same form of words: 'If a One (*or* the One) is', or 'is not'. Since they lead to various incompatible conclusions, the student is expected to infer that the formula is ambiguous, and to make out for himself what sort of 'One' and what sort of 'Others' are being discussed on each occasion. If he turns back to the opening paragraphs of the several Hypotheses, he will discover that Plato has furnished the clue. He has merely to see that these opening paragraphs, though usually cast into the form of a deduction, really define the sense in which 'the One' or 'being' is to be understood in each Hypothesis.

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[1] Proclus at the beginning of Book vi of his Commentary points out very clearly that the reason why there are nine Hypotheses is that both 'the One' and 'being' have more than one sense (vol. vi, p. 4). He refutes the complaint of other critics that to jump from one sense of 'the One' to another would be contrary to the aim of the method announced, which ought to consider the consequences of affirming and denying the *same* hypothesis (*ibid.*, p. 8).

[2] As Lotze wrote: 'The simplest of the conceptions here employed, that of a thing and that of its being, however lucid they appear at first, on closer consideration grow always more obscure.'

As we proceed, we shall find that Plato, in scattered passages, unobtrusively indicates the many ambiguities lurking in the phrase: 'If a One (*or* the One) is'. His contemporaries, knowing only their own language, were either unaware of them or, like the eristic sophists, used them to entangle disputants in contradictions or paradoxical nonsense. No one had squarely faced the fact that the simplest words may have many different meanings, which must be defined before serious argument can begin. Owing to certain peculiarities of Greek grammar, 'the one' (τὸ ἕν) can mean (1) Unity or Oneness in general; (2) the unity of anything that has unity or is one thing; (3) that which has unity, anything that is one; (4) the one thing we are speaking of, as opposed to 'other ones', and so on. The words for 'being' (τὸ ὄν, εἶναι, οὐσία) are even more ambiguous. 'Being' can mean (1) the sort of being that belongs to any entity, whether it exists or not; (2) an entity which has being in this sense, any term that can be the subject of a true statement; (3) the essence or nature of a thing; (4) existence; (5) that which has existence, or (collectively) all that exists. There is also the 'copulative' use of 'is' (Plato's μετέχειν); and 'is' meaning 'is the same as', with 'is not' meaning 'is different from' (as explained in the *Sophist*). English is a more analytical language, and it is sometimes impossible in translation to avoid giving too precise a rendering of the hypothesis, 'If a (*or* the) One is'. The reader must be asked to remember that the phrases we may substitute for the sake of clearness, such as 'unity' or 'one thing' for 'the One', vague as they still are, fail to reproduce the full ambiguity of the original.

Since it is obvious that the One of Hyp. I is a different thing from the One of Hyp. II, we should be prepared for further shifts of meaning in the later Hypotheses. We shall miss Plato's whole intention, if we assume beforehand that 'the One' must stand all through for the same thing, and then identify it with the One Being of Parmenides, or the Neoplatonic One (or Ones), or the Hegelian Absolute, or the universe, or the unity of the real, or the Platonic Form.[1] The consequence of presuming a constant meaning has been that the arguments have appeared to be very largely either fallacious or meaningless. My own study of them has convinced me that they cease to be either fallacious or meaningless on the supposition that Plato is exposing the ambiguities of 'the One' and of 'being'. For all that we know beforehand, either of these terms may be used in eight different senses, as many as there are Hypotheses. It will be found that, at the beginning of each Hypothesis and sometimes in the later course of the deductions, Plato sufficiently indicates in what sense the terms 'One' and 'being' are intended. At the outset of any Hypothesis 'the One' should be taken as having neither more nor less meaning than is there defined, whatever further attributes it may be found, as the argument proceeds, to be capable, or not capable, of possessing.

The same remarks apply to 'the Others'. Most critics have assumed beforehand that this phrase has also a constant meaning all through: that 'the Others' are the other Forms, or the sensible world, or an analogous element in both the sensible and the intelligible. We shall avoid any such presupposition and be prepared to find that 'the Others' may have as many meanings as 'the One' to which they are opposed. In a modern book it would be natural, in certain contexts, to substitute letters, e.g. '*A*' for 'the One' and 'not-*A*', or '*B*', or some such symbol for 'the Others'. The opening paragraph of an Hypothesis would then state that '*A*' stands for 'the One' in the sense there defined, or 'not-*A*' or '*B*', etc., for 'the Others' in the appropriate sense. But it is better to keep more faithfully to Plato's practice. In the translation, accordingly, 'One' and 'Others' will be retained and printed with an initial capital where the terms are used in this way. Until the definition has been stated, the terms are just as much blank cheques as the symbols *A* and *B*. The reason why no two interpretations of the *Parmenides* agree is that the value of these blanks has first been filled in from extraneous sources, and the deductions have then been twisted into some sort of conformity or else abandoned as sophisms.

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[1] Parmenides' programme at 136AB may suggest that 'the One' = the Platonic Form, Unity itself, and it has been argued that τὸ ἕν should be translated throughout by 'Unity'. I have found it impossible to make sense of the arguments on that assumption. Also at 137B Parmenides says he will take *his own* hypothesis of the One Being, which is certainly not identical with the Platonic Form. This is another indication that 'the One' is ambiguous, and that the criticisms implied in the Hypotheses apply partly to Parmenides' One Being, partly to Plato's Unity itself.

I cannot for a moment claim that the principles of interpretation here recommended and applied remove all the difficulties and provide every argument with a valid sense. The reader must judge how far they are successful in giving the dialectical exercise as a whole a significance that is serious and important as well as relevant to the problems in the earlier part of the dialogue. I venture, at least, to predict that no one who has the patience to read the rest of this book will believe that Plato himself was unconscious of the ambiguities of ' One ' and ' being ', or that he was consciously playing on those ambiguities to construct a string of sophisms. He has elsewhere expressed vigorously enough his contempt for such fruitless *jeux d'esprit*. The Stranger in the *Sophist* (259B), after setting out a number of statements which will appear contradictory to anyone who ignores the ambiguities of ' is ' and ' is not ', remarks that there is nothing clever in making play with such ambiguities. What is hard and worth doing is 'to follow our statements step by step and, in criticising the assertion that a different thing is the same or the same thing is different in a certain sense, to take account of the precise sense and the precise respect in which they are said to be one or the other. Merely to show that in some unspecified way the same is different or the different is the same, the great small, the like unlike, and to take pleasure in perpetually parading such contradictions in argument—that is not genuine criticism, but may be recognised as the callow offspring of a too recent contact with reality.' In the dialectical exercise Plato demands of his student precisely the effort he here describes as hard but worth the making. He is not himself putting forward a futile parade of real or seeming contradictions which would contribute nothing to the genuine criticism of Parmenides or of the Megarians or of anyone else.

The revered Parmenides, moreover, is the last person whom Plato would have represented as offering such a farrago under the pretence of giving the young Socrates a salutary training. These antics were good enough for the elderly ex-athletes, Euthydemus and Dionysodorus ; but a little of them goes a long way. In the *Euthydemus* they are administered only in small doses, interspersed with passages of serious discourse by Socrates and brilliant pieces of description; and the whole is redeemed by an exceptionally exquisite style. All these graces and mollifications are lacking in the second part of our dialogue, and those critics who find in it an exhibition of rollicking fun must possess an enviable sense of humour.[1] Mr. W. F. R. Hardie [2] has recently urged that 'we ought not hastily to abandon the view that it (the dialectical exercise) has a serious purpose and perhaps even a fairly definite philosophical content. It seems to me clear that the passage of transition just summarised is calculated to lead us to expect that the second part of the dialogue will throw some real light on the difficulties which have been raised in the first. And an examination by the founder of Eleaticism of "his own hypothesis" can hardly avoid ultimate issues. The reference in the *Theaetetus* (183E) to the "noble depth" of what was uttered by "Parmenides" on this occasion seems to me to tell strongly against the view that the hypotheses of the second part are nothing but an obscure joke or a long and tedious parody.' I agree; and I hope to show that the philosophical content is even more 'definite' than Mr. Hardie suspects.

The question whether any of the arguments really deserve to be called 'sophisms' can be decided only by a careful study of each one in its own context. My own conclusion is that the appearance of fallacy is chiefly due to Plato's deliberate reproduction of the deductive form of reasoning characteristic of the Eleatics, and exemplified in Parmenides' *Way of Truth*. It is clear that each Hypothesis begins with a definition, sometimes disguised as a series of inferences. Thus, instead of saying, 'Let us suppose that "the One" means, for our present purpose, absolute unity which excludes any sort of plurality,' Parmenides will say, 'If the One is *one*, it will not be many; and so it will have no parts and will not be a whole.' That is really the definition; but the deduction proper follows without a break or any change of form: 'And having no parts, it will have no beginning or middle or end; and so no limits. And consequently it will be without shape,' and so on to the end of the whole chain of inferences.[3] This masking of the definition in the semblance of an inference has misled interpreters into supposing that 'the One' is the same thing in all the Hypotheses, and that the conclusions reached must therefore be contradictory—either sophisms or ‘ antinomies ’ requiring some reconciling synthesis.

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[1] 'Considered light-heartedly, the *Parmenides* is one of the funniest things in philosophy—the youthful Socrates, the future champion of sound sense and right reason, taking a lesson, open-mouthed—in ontological rigmarole from the old Eleatic dialectician, in the company of Zeno, the subtle juggler of apory and paradox!'—P. H. Frye, *Plato* (Nebraska, 1938), p. 28.

[2] *A Study in Plato*, p. 100. Cf. also Ritter's remarks, *Platon*, ii, 85.

[3] In Hyp. II, however, the most important of all, and in the first of the negative Hypotheses (160B–D), the definition is hardly disguised.

Plato’s plan of representing every step in the argument as following from a previous step sometimes entails another misleading feature. Now and then assumptions that are really new premisses are introduced, not at the outset of an argument, but after the deduction has already proceeded some way. Instances will be found at 147A and 149C. The reader must observe for himself that it is the furtive intrusion of these additional assumptions that leads to a consequence apparently contradicting one that has been reached just before. We shall find that in most cases the fresh assumption is a false Eleatic dogma, entailing a result that is false and unacceptable to common sense.

It is further necessary to suppose that sometimes the conclusion that the One has or ‘ will have ’ a certain attribute really means that there is no reason why it should not have it. This principle, for instance, applies to some of the positive conclusions about the One of Hyp. II, which is defined as a thing that has being as well as unity and is a whole of parts. It is impossible to infer that *anything* so defined *must* have geometrical shape, exist in space, and be actually in motion and at rest. But we can assert that there is nothing illogical in adding these qualifications to a thing of which all that we yet know is that it answers to that definition.

There will remain a few cases in which the argument seems to be formally defective or fallacious. Thus at 141E Plato takes a short cut from a true premiss to a true conclusion which does not immediately follow. At 148A there appears to be a puzzle set for the detection of fallacy or ambiguity ; but this is at once supplemented by an alternative proof capable of a valid interpretation. Apart from a few instances like these, the great bulk of the deductions are sound, although a certain number are so vaguely worded that, with the evidence at our disposal, we cannot be sure of the true meaning.

HYPOTHESIS I

137C–D. *If the One is defined as absolutely one, it is in no sense many or a whole of parts*

The opening paragraph, as has been pointed out, really defines what is meant by the ‘ One ’ which is the subject of all this first Hypothesis. We are told that the term ‘ one ’ is to be taken as excluding plurality altogether ; the One is not to have any distinction of parts or to be in any sense many or diverse. ‘ The One ’ means an object of which neither more nor less than that is true.[1]

137C. Well then, said Parmenides, if there is a *One*, of course the One will not be many.[2] Consequently it cannot have any parts or be a whole. For a part is a part of a whole; and a whole means that from which no part is missing; so, whether you speak of it as ' a whole ' or as ' having parts ', in either case the One would consist of parts and in that
D. way be many and not one. But it is to be one and not many. Therefore, if the One is to be one, it will not be a whole nor have parts.

All the subsequent inferences follow from this definition. We are to suppose that the One is just simply *one* and nothing else.[3] It is not ' many ' in any sense. This is expressed by saying that it is not a ' whole of parts ', not in any way divisible. The term ' part ' is to be understood in the widest sense. It covers not only the parts into which a whole thing might be divided (as a number into units, an area into smaller areas, a material body into pieces), but any and every diversity of aspect or character. This appears not only from some of the consequences deduced, but also from the parallel paragraph defining the different One of Hypothesis II. That One is not simply ‘ one ’ but ‘ a One which *is* ’ (‘ one entity ’, ἓν ὄν), and it is called a whole of which its oneness and its being are ‘ parts ’, whereas we should naturally describe them as ‘ elements ’ or ‘ aspects ’ or ‘ characters ’.[1] So the One of the present Hypothesis excludes any sort of diversity. At 140A it is explicitly stated that it cannot have any second character. Hence it is not, like the One of Hypothesis II, *something* (ὄν) which *is* one or *has* unity.[2] The only thing you can say of it is that ‘ it is one ’; and it will finally appear (141E) that you cannot even say that. For ‘ is ’ in this statement must have some meaning. If it means or implies ‘ *exists* ’, then, were the statement true, the One would have a second character, existence. If it means that the One *possesses* unity, that again is false, for we should have a thing (ὄν) possessing a character distinct from itself. So this One is separate (χωρίς) from all other characters. No other character belongs to it; it contains no distinguishable aspects or ‘ parts ’. It is just ‘ one ’ and nothing else.[3] Moreover, it will appear later from the complementary Hyp. IV, which considers the consequences of this supposition for the Others, that there can be no Others in the sense of a plurality of ‘ other ones ’. Consequently the One of our Hypothesis is (as Parmenides said of his One) not only indivisible but *unique*. This, however, is a matter that rather concerns the Others. Here we are considering only the One.

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[1] Cf. Taylor (*Plato*, 1926, p. 363): The subject of the thesis ' it is one ' is, ' as the character of the reasoning shows, " anything whatever which is conceived to be a mere undifferentiated unity admitting no plurality whatsoever ".'

[2] εἰ ἓν ἐστιν, ἄλλο τι οὐκ ἂν εἴη πολλὰ τὸ ἕν ; Taylor translates: ' *if it is one*, of course the one will not be many ', to mark a difference between the supposition here and in Hyp. II (142B), where it appears first in the form ἓν εἰ ἔστιν, (' *if there is one* ' Taylor), then as εἰ ἓν ἔστιν (142C, 3), and then again as ἓν εἰ ἔστιν (c8). It is true that the opening paragraphs in the two Hypotheses define the meaning differently. But if the Greek is written without accents, the difference between εἰ ἑν ἐστιν and ἑν εἰ ἐστιν may be only a matter of emphasis. In Hyp. III and IV, two different suppositions are both expressed by ἓν εἰ ἔστιν (157B, 159B). In Hyp. V (160B) we find εἰ μὴ ἔστι τὸ ἕν, εἰ ἓν μὴ ἔστιν, ἓν εἰ μὴ ἔστι for the same supposition. In Hyp. VII and VIII ἓν εἰ μὴ ἔστι is used for two different suppositions (164B, 165E). In our passage the reader would naturally take εἰ ἑν ἐστιν as analogous to Zeno's εἰ πολλα ἐστι (128D, 5), ' if there is a many ', and as stating Parmenides' thesis that ' there is a One ', mentioned above. Accordingly he would understand: ' If there is a One, of course the One (τὸ ἕν, *either* ' the One in question ' *or* ' that which is one ') will not be many.' I should print εἰ ἓν ἔστιν here, as at 137B, 4 and 142C, 3.

Referring to this passage, Proclus (*Eucl.* I, p. 99) remarks: ' That point comes after 1, line after 2, etc. Parmenides indicates when he first negates *plurality* of the One, and then *wholeness*. If " many " is prior to " whole ", number is prior to the continuous, 2 to the line, 1 to the point.'

[3] Wahl, p. 114, *Il s'agit donc de ne laisser dans sa pensée que l'idée de l'unité pure et simple.*

The full significance of this definition emerges only as the implications are deduced in the following sections. Nothing can be truly affirmed of this One; so the conclusions are all purely negative. The deduction proper now begins. It is shown that such a bare One cannot possess any of a whole series of attributes. These are taken in a logical order, which will be followed again in Hyp. II. They fall into several groups. The first group, occupying the next four sections, are (1) limit; (2) spatial extension and shape; (3) place; (4) motion (including change of all kinds) and rest. The question is whether a bare One can be successively clothed with these attributes. (1) If it could have limit, it could be a definite quantity (number or magnitude). (2) If we could then add spatial extension, the One would become a geometrical magnitude. (3) It might then be further qualified as a body with position in physical space. (4) Finally, such a physical body might move and change or be at rest. We should thus have accomplished an evolution like the Pythagorean evolution from the original Unity to the sensible body, or like Parmenides' deduction of his limited Sphere of Being filling all space from his premiss, 'There is a One'.

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[1] Cf. 166A, where μέρος ‘ part ’ is used for any element in, or character that belongs to, existents (τὶ τῶν ὄντων), and the use of μέρη (or εἴδη) for the ‘ parts ’ of the soul in the *Republic*.

[2] The distinction between just ‘ being unity ’ and ‘ having unity ’ (μετέχειν τοῦ ἑνός) is drawn at 158A.

[3] So Dam. § 48, p. 98, κατὰ τὴν πρώτην ὑπόθεσιν τὰ πάντα ἀπ’ αὐτοῦ (sc. τοῦ ἑνὸς) ἀνελών, καὶ τὸ εἶναι πρὸς ἅπασιν, αὐτὸ μόνον ἀφίησι τὸ ἓν γεγυμνωμένον ἀπὸ τῶν ἄλλων ἁπάντων.

The next four sections prove that, if we start from the bare Unity defined, we cannot advance a single step towards clothing that bare One until it becomes a physical body with extension and position in space and the capacity for motion or rest.

137D. *The One (having no parts) is without limits*

137D. And, if it has no parts, it cannot have a beginning or an end or a middle; for such things would be parts of it. Further, the beginning and end of a thing are its limits. Therefore, if the One has neither beginning nor end, it is without limits.

This statement has sometimes been misunderstood. 'Without limits' (ἄπειρον) must, as the whole context shows, be taken in a purely negative sense. It is not meant that the One has unlimited extent, such as will be deduced for the number series in the corresponding section of Hyp. II (142D ff.); for any sort of extent implies distinguishable parts, and so contradicts the definition. Contrast the One Being of Melissus, who used the same word (ἄπειρον) to assert that his One Being was unlimited in extent.

137D–138A. *The One (being without parts) has no extension or shape*

137D. Consequently the One has no shape: it is not either
E. round or straight. Round is that whose extremity is everywhere equidistant from its centre; and straight is that of which the middle is in front of both extremities.[1] So if the One had either straight or round shape, it would have parts and so be many. Therefore, since it has no parts,
138. it is neither straight nor round.[2]

The wider notions 'limited' and 'unlimited' (the first Pythagorean pair of opposites) apply to quantities of all kinds. Shape is a geometrical property, peculiar to continuous magnitudes, having both limit and the ‘ unlimited ’ element of extension. It belongs to the lines and plane and solid figures of geometry. These come after numbers in the world of mathematical Forms. If the One were to evolve into a physical body, this is the stage at which it would acquire spatial extension and figure. But this advance is impossible, because it would involve distinction of parts. Euclid opens with the definition of the point, as that which *has no parts* ; he then defines the line as length without breadth, and adds that the *limits* of the line are points. So the line has limits, a beginning and end and the interval between. On this Proclus [1] remarks that ‘ the point seems to bear the image of the One, for the One also has no parts, as Plato shows in the *Parmenides*’ (here).

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[1] Heath, *Thirteen Books of Euclid*, i, 165, remarks that this is the only definition of a straight line that is authenticated as pre-Euclidean. 'Aristotle quotes it in equivalent terms (*Topics*, vi, 11, 148*b*, 27), οὗ τὸ μέσον ἐπιπροσθεῖ τοῖς πέρασιν.'.' The middle obstructs the view of either end for an eye situated at the other end.

[2] At 145B shape is defined as 'either straight or round or a mixture of the two'. Cf. *Philebus*, 51C, Ar., *de caelo*, 268*b*, 18, Procl., *Eucl.* I, p. 103.

138A–B. *The One (being without parts or extension) is nowhere, neither in itself nor in another*

138A. Further, being such as we have described,[2] it cannot be anywhere ; for it cannot be either (*a*) in another, or (*b*) in itself.

(*a*) If it were in another, it would be encompassed all round by that in which it was contained,[3] and would have many contacts with it at many points ; but there cannot be contact at many points all round with a thing which is one and has no parts and is not round.

(*b*) On the other hand, if it were in itself, it would have,
to encompass it, none other than itself ; since it would
B. actually be within itself, and nothing can be within some-
thing without being encompassed by that thing. Thus the encompassing thing would be one thing, the encompassed another ; for the same thing cannot as a whole both encompass and be encompassed at the same time ; and so, in that case, the One would no longer be one, but two.

Therefore, the One is not anywhere, being neither in itself nor in another.

If the One could have been endowed with extension and figure, we might here have gone on to determine it further as a physical body in a place. Then, if it did not occupy the whole of space, it would have more than one point of contact with whatever was outside it. And even if it were (like Parmenides' One Being) a sphere occupying the whole of space, it would be 'in itself' in the sense that we could distinguish its spherical boundary from the interior.[1] But then it would have distinguishable parts. Having no parts, it cannot be 'in itself' in the sense in which a thing, considered as all its parts, is in itself as whole.

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[1] *Eucl.* I, p. 104.

[2] τοιοῦτόν γε ὄν. This phrase (and similar phrases frequently used elsewhere) should be noted. It means that the present negation of an attribute follows logically from the previous negations and from the definition.

[3] Ar., *Phys.* 209*b*, 32 : ‘ It is held that what is anywhere (που) is itself something and also that there is a different thing outside it.’ Procl. (vol. vi, 126) mentions critics who took ἐν ἄλλῳ to mean ἐν τόπῳ, ἐν ἀγγείῳ, but he is not content with so simple a view.

Plato is evidently thinking of Parmenides' Sphere; hence the specific denial of *roundness*. To the argument as it stands it might be objected that the geometrical point had been regarded as indivisibly one and having position in space without any question of 'contact at more than one point' with its environment, or of its being 'in itself' as here defined. This is ignored because at this stage we have reached the notion of an extended body, and all that is here asserted is that the One, not being an extended body, cannot be 'in another' or 'in itself' in the sense applicable to such bodies in physical space.

138B–139B. *The One (not being a physical body in space) is neither in motion nor at rest*

If the One could have the attributes so far denied, it would now be an extended body with position in space, and the possibility would here arise that it should either move or remain still, and that it should possess other properties, in respect of which it might suffer change. But the One we have defined cannot move or change or even remain where it is (for it is nowhere) or persist with such properties as it has (for it has no properties).

138B. Next consider whether, such being its condition, it can be (*a*) in motion or (*b*) at rest.

(*a*) If it were in motion, it would have to be either
C. moving in place or undergoing alteration; for there are no other kinds of motion.[2]

Now, if the One alters, so as to become different from itself, it surely cannot still be one. Therefore, it does not move in the sense of suffering alteration.

The word for change or alteration (ἀλλοίωσις), as distinct from local motion, is used in its widest sense, covering any properties which might be altered so that the thing should become 'other' than it was.[1] Later (156B) various kinds of alteration will be enumerated: combination and separation, becoming like or unlike (in quality), increase and decrease in size. But here the only possible change is that the One (which has no second property that it could lose by alteration) should cease to be one. But this would mean its complete disappearance, not alteration; and even disappearance is impossible: the One cannot cease to exist, since (as we shall discover later, 141E) it has not the second property, existence.

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[1] Cf. Ar., *Phys.* 209*b*, 1, 'If place is what *primarily* contains (τὸ πρῶτον περιέχον) each body, it would be a limit (πέρας), so that the place would be the form or shape (τὸ εἶδος καὶ ἡ μορφή) of each body by which the magnitude or the matter of the magnitude is defined; for this is the limit of each body.'

[2] Cf. Theaet. 181D: the two kinds of motion (κίνησις) are local motion and alteration.

138C. Does it, then, move in place? If it does, then it must
either turn round in the same place or shift from one place
to another. If it turns round, it must rest on a centre
and have those parts which revolve round the centre as
D. different parts of itself. But a thing which cannot have a
centre or parts cannot possibly be carried round on its centre.
If it moves at all, then, it must move by changing its place
and coming to be in different places at different times.
Now we saw that it could not *be* anywhere in anything.
It is still more impossible that it should *come to be* in anything.
If a thing is coming to be in something, it cannot
be in that thing so long as it is still coming to be in it, nor
yet can it be altogether outside it, since it is already coming
E. to be in it. Accordingly this can happen only to a thing
which has parts; for part of it will be already in the other
thing and part of it outside at the same time, and a thing
which has no parts surely cannot possibly *be*, at the same
time, neither wholly inside nor wholly outside something.
It is still more impossible that a thing which has no parts
and is not a whole should *come to be* in anything, since it
cannot do so either part by part or as a whole. Hence
139. it does not change its place either by travelling anywhere
and coming to be in something, or by revolving in the same
place, or by changing.

Therefore the One is immovable in respect of every kind of motion.

That the One, not being a body situated in space, cannot have locomotion is obvious. It is equally impossible that it should be at rest anywhere, or be said to remain in the same condition or in possession of the same properties without alteration; for the One has no properties.

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[1] So Proclus (vol. vi, 145) explains that ἀλλοίωσις here includes all *internal* changes.

139A. (*b*) On the other hand, we also assert that it cannot actually *be* in anything. Consequently it can never be in *the same* (place or condition), because then it would *be* in that selfsame (place or condition), and we saw that it could not be either in itself or in anything else. The One, then, B. is never in the same (place or condition). But what is never in the same (place or condition) is not at rest or stationary.

It appears, then, that the One is neither at rest nor in motion.

With respect to motion and rest the conclusions, as before, are purely negative. The One which is a bare ' One ', nowhere and with no properties, can no more remain motionless and unchanged in property than it can move or change.

Here the first section of the Hypothesis is complete. The argument has been sound at every point. The result is that, if you start with the conception of a One which is one and nothing else, without any kind of diversity or plurality, then you cannot clothe this bare unity with any further attributes, since that would be to contradict the definition. Hence, with such a starting-point, there can be nothing like the Pythagorean process of evolution. Without the two elements of ' limit ' and ' unlimited ', there can be no number (plurality of units) and not even a unit of number. There will be no point (unit with position) which might generate the line, surface, and solid of geometry and so yield a body having shape. Finally, there can be no sensible body in physical space, such as might move or remain still and possess sensible qualities capable of change.

The next three sections are concerned with relations (as we should call them) which a ' One ' might be expected to have, but cannot in fact have, either to itself or to something else : sameness and difference, likeness and unlikeness, equality and inequality. These are not further determinations clothing the original bare One, such as those rejected in the preceding sections, but characters which would belong to the One if it could have been so clothed. The absence of these characters can be deduced partly from the original definition of a One which is not also many, partly from the absence of one or another of those determinations.

In the corresponding sections of Hyp. II we shall hear of ' Others ' or ' the Others ' (τἆλλα) in the plural. But here only the singular ' another ' or ' something else ' (ἕτερον) is used. The reason is given in the complementary Hyp. IV, which deduces the consequences for the Others from the present supposition of a bare One, which must remain in complete abstraction and cannot communicate its character. It will there appear that there can be no Others in the sense of ' other *ones* '. So there is not even ' another ' to which the One could be related by the characters now to be considered. The One is unique, in total isolation.

It is, however, because of its own nature as defined at the outset that the One cannot have sameness, difference, likeness, etc. All these words have meanings distinct from the meaning of ' one ' ; they are characters distinct from oneness. The One as defined has no character other than oneness. This is explicitly stated below at 140A.[1] It must also be remembered that the One as defined is not *something* which is one, or has unity, and might lose that unity and still persist. It is not one *thing* (ἓν ὄν), but just simply ' one '.

139B–E. *The One (lacking the above qualifications) is not the same as, or different from, itself or another*

139B. Further the One cannot be either the same as another or the same as itself, nor yet other than itself or other than another.

(*a*) Were it other than itself, it would be other than one and so would not be one. (*b*) And if it were the same as another, it would be that other and not be itself ; so that,
C. in this case again, it would not be just what it is, one, but other than one.

Therefore the One will not be the same as another or other than itself.

These conclusions follow at once from the notion of a One that is one and nothing else, and cannot be or become anything but just one.

139C. (*c*) Nor can it be other than another, so long as it is one. To be other than something properly belongs, not to ' one ', but only to an ' other than another '. Consequently it will not be other in virtue of its being one, and so not in virtue of being itself, and so not *as* itself ; and if as itself it is not
D. in any sense other, it cannot be other than anything.

The conclusion is sound. To be other than something else is not the same thing as to be one.[1] So a One which is simply one and has no second character at all, cannot have the character of being other than anything. Its ' oneness ', which is all there is of it, cannot make it so. Not to mention the fact (which appears in Hyp. IV) that there can be no other one for it to be other than.

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[1] Jackson (*Journ. Philol.* xi, 311 note) pointed out that every one of the inferences is substantiated by this initial assumption, which ' is in fact the Eleatic dogma interpreted with a strictness to which the Eleatics themselves never attained '.

139D. (*d*) Nor yet can it be the same as itself. For the character (*φύσις*) of unity is one thing, the character of sameness another. This is evident because when a thing becomes ' the same ' as something, it does not become ' one '. For instance, if it becomes the same as the many, it must become many, not one ; whereas if there were no difference whatever between unity and sameness, whenever a thing became ' the same ', it would always become one, and whenever one, E. the same. So if the One is to be the same as itself, it will not be one with itself, and thus will be one and not one ; and that is impossible. Consequently it is equally impossible for the One to be either other than another or the same as itself.

Thus the One cannot be other than, or the same as, either itself or another.

The reasoning here is not, as some say, sophistical, but rests on the same premiss : that the One we are supposing has no second character. ' Same ' and ' One ' are two different meanings or characters. As we might say, the proposition ' x is one ' is not the same as the proposition ' x is the same as itself '. If the One has (or *is*) only one character (as we have assumed throughout), and if we now suppose that character to be sameness, then it cannot also have (or be) the character of oneness ; which is absurd and contradicts the hypothesis.

All the conclusions in these sections, as in the other sections, are purely negative. We cannot say that the One is the same as itself or anything else ; but that does not imply that it is different from itself or anything else. It cannot have either of the two contrary characters.

139E–140B. *The One is not like or unlike itself or another*

Of the three pairs of contraries in this group, sameness and difference are the most general and comprehensive. Likeness is now defined in terms of sameness : two things are like when they both have any identical character.[1] To say that two things have an identical character (*ταὐτὸν πεπονθέναι*) is equivalent to saying that the same statement can be truly made about both ; the verb *πάσχειν* is frequent in that sense. So 'character' must be taken in a very wide sense, covering the whole field of what Aristotle called 'predicates' (including all relations).[2] Here the fundamental premiss that the One can have no second character becomes most explicit.

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[1] Cf. the argument at 143B : Unity and being are other than one another, not *qua* unity or *qua* being, but *qua* other.

Two things will be alike, then, when they are the same in respect of any one character that can be truly said to belong to them ; they need not be the same in every respect. If the only thing you can truly say of the One is that it is 'one' (supposing you can even say that), you cannot also say that it is like anything—even itself—or unlike anything.

139E. Nor can the One be (*a*) like or (*b*) unlike anything, whether itself or another.

(*a*) A like thing is a thing which has an identical character.
But we have seen that the character 'same' is distinct
from the character 'one'. Now if the One has any
140. character distinct from being one, it must have the character
of being more things than one ; and that is impossible.
So it is quite impossible that the One should be a thing
'having the same character' as either another or itself.

Therefore the One cannot be like another or like itself.

(*b*) But neither is it true of the One that it is different ;
for, in that case again, it would be true of it that it was
more things than one. But if 'like' means that of which
the same thing is true, a thing that is unlike itself or another
B. will be that which can be truly said to be different from
itself or another. And the One, it appears, cannot be said
to be different in any way. Consequently, the One is in
no way unlike either itself or anything else.

Therefore the One cannot be like or unlike either another or itself.

140B–D. *The One is not equal or unequal to itself or to another*

The third pair of contraries, equal and unequal, is still further restricted, to the category of quantity : it applies to number and magnitude. A number, according to the ancient definition accepted by Plato and later authorities, is 'a plurality of units' (*πλῆθος μονάδων*). It follow that 1 (the unit) is not a number, and also that all numbers are commensurable, each consisting of so many units. Irrational quantities, such as $\sqrt{2}$, were not called 'numbers'. They were treated as geometrical magnitudes, to be represented by lines, such as the diagonal of the square.[1]

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[1] Cf. Ar., *Met.* 1018*a*, 15 : 'Those things are called "like" which have the same attributes (*ταὐτὸ πεπονθότα*) in every respect, or have more attributes the same than different, or whose quality is one.'

[2] Procl. (vi, 195), *πᾶν γὰρ τὸ ὁτιοῦν πεπονθὸς πολλά ἐστι· πάθος γὰρ καλεῖ τὴν μέθεξιν ἄλλου τινός*

'Equal' can be defined simply as 'having the same number of measures' (units of number or magnitude). 'Unequal' as applied to commensurables (including all numbers) means 'having a *different* number of the *same* measures'. But incommensurable magnitudes require another definition: they can be divided into the *same* number of *different* measures (one greater than the other).[2] Plato first states these definitions. It is then easy to show that the One cannot be said to be equal or unequal to anything.

140B. Further, the One, being such as we have described, will not be either (*a*) equal or (*b*) unequal either to itself or to another.

If it is equal, it will have the same number of measures as anything to which it is equal. If greater or less, it will
C. have more or fewer measures than things, less or greater than itself, which are commensurable with it. Or, if they are incommensurable with it, it will have smaller measures in the one case, greater in the other.

(*a*) Now a thing which has no sameness cannot have the same number of measures or of anything else. Therefore the One, not having the same number of measures, cannot be equal to itself or to another.

'Having no sameness' (*μὴ μετέχον τοῦ αὐτοῦ*) means that no statement beginning 'The One is the same as . . .' or 'The One has the same . . .' can be true. This follows from the One not having the character 'same', as proved above.

140C. (*b*) On the other hand, if it had more or fewer measures, it would have as many parts as measures; and thus, once
D. more, it would be no longer one, but as many as its measures. And if it were of one measure, it would be equal to that measure; whereas we saw that it could not be equal to anything.

Therefore, since it has neither one measure, nor many,

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[1] See above, p. 60.

[2] Procl. vi, 207, ἀσύμμετρον δὲ τὸ διαιρούμενον εἰς ἴσα μὲν κατ' ἀριθμόν, ἄνισα δὲ κατὰ μέγεθος.

140D. nor few, and has no sameness at all, it appears that it can never be equal to itself or to another, nor yet greater or less than itself or another.

Inequality is denied by virtue of the original definition of the One as not being a whole of parts. Measures are parts; or, even if you try to assert that there is only one measure involved in the case of the One, that would mean that the One had the *same* measure as itself, and, as we have seen, no such statement can be true.

140E–141D. *The One cannot be, or become, older or younger than, or of the same age as, itself or another, or be in time at all*

Here the addition of a further determination—existence in time—is considered and rejected on the basis of conclusions reached in the last three sections. If the One were in time, statements involving the terms 'same', 'different', 'equal', 'unequal', would be true of it, and it has been shown that no such statements can be made.

140E. Again, can it be held that the One can be older or younger than anything or of the same age with anything?

If it is of the same age with itself or another, it will have equality of duration and likeness[1]; and we have said that the One has neither likeness nor equality. We also said
141. that it has no unlikeness or inequality. Such a thing cannot, then, be either older or younger than, or of the same age with, anything.

Therefore the One cannot be younger or older than, or of the same age with, either itself or another.

We may infer that the One, if it is such as we have described, cannot even occupy time at all. Whatever occupies time must always be becoming older than itself, and 'older' always means older than something younger. Consequently,
B. whatever is becoming older than itself, if it is to have something *than* which it is becoming older, must also be at the same time becoming younger than itself. (What I mean is this. If one thing is already different from another, there is no question of its becoming different: either they both are now, or they both have been, or they both will be, different. But if one is in process of becoming different,

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[1] ὁμοιότητος here need not go with χρόνου. If two things are of the same age, they have both (*a*) equality of duration and (*b*) likeness in the sense above defined: the statement that they are of a certain age will be true of both.

141B. you cannot say that the other has been, or will be, or as
C. yet is, different; it can only be in process of becoming different. Now the difference signified by 'older' is always a difference from something younger. Consequently, what is becoming older than itself must also at the same time be becoming younger than itself.) Now, in the process of becoming it cannot take a longer or shorter time than itself; it must take the same time with itself, whether it is becoming, or is, or has been, or will be. So, it seems, any one of the
D. things that occupy time and have a temporal character must be of the same age as itself and also be becoming at once both older and younger than itself. But we saw that none of these characters can attach to the One.

Therefore the One has nothing to do with time and does not occupy any stretch of time.

All the expressions for change of temporal relations are studied more fully at the corresponding stage in the next Hypothesis, where we shall be considering a thing that can exist in time (151E ff.). The above argument is not a 'sophism'. Whatever exists in time must be of a *different* age at every moment from its age at any earlier moment; and the lengthening interval between its younger self and its older self must always be the *same* as the interval between its older self and its younger self. But we have seen that no propositions involving the terms 'same' and 'different' can be true of the One we have defined.

Proclus (iv, 232) has preserved Syrianus' explanation of how it is that what is becoming older than itself must also be becoming younger than itself. It is interesting as distinguishing clearly the two ways of conceiving time. 'There are two ways in which a thing may be in time: (1) as advancing in a straight line and starting from one point and ending at another; (2) as travelling round in a circle and having its motion from and to the same point, which is both beginning and end, so that the motion never stops, every point in it being just as much a beginning as an end.' In this second case of periodic motion in time, the thing is becoming older in so far as it is getting farther from its beginning, but younger in so far as it is approaching its end, since in getting nearer to its end it is getting nearer to its beginning, and to get nearer to one's beginning is to get younger. Syrianus understood the passage to refer to the periodic revolutions of the divine souls; but Plato in the longer account of time relations in Hyp. II appears to regard time as a straight line, not a circle, and Proclus himself falls back on a more general interpretation, which does not involve periodicity.

141D–142A. *Since it is not in time, the One in no sense ' is ', and it cannot even be named or in any way known*

141D. Again, the words ' was ', ' has become ', ' was becoming ' are understood to mean connection with past time ; ' will
E. be ', ' will be becoming ', ' will become ', with future time ; ' is ' and ' is becoming ', with time now present. Consequently, if the One has nothing to do with any time, it never has become or was becoming or was ; nor can you say it has become now or is becoming or is ; or that it will be becoming or will become or will be in the future. Now a thing can have being only in one of these ways. There is, accordingly, no way in which the One has being.

Therefore the One in no sense *is*.

It cannot, then, ' be ' even to the extent of ' being ' one ; for then it would be a thing that is and has being. Rather, if we can trust such an argument as this, it appears that
142. the One neither is one nor is at all.

And if a thing is not, you cannot say that it ' *has* ' anything or that there is anything ' *of* ' it. Consequently, it cannot *have* a name or be spoken of, nor can there be any knowledge or perception or opinion *of* it. It is not named or spoken of, not an object of opinion or of knowledge, not perceived by any creature.

Now can this possibly be the case with the One ?

ARISTOTELES : ' I do not think so.'

There are several features of this argument that call for remark. The conclusion itself—that the One can have no sort of being—is sound, and could be deduced directly from the definition in the first paragraph of the Hypothesis.[1] If we conceive the One as one and nothing else whatever, it cannot have any second character that could be meant by the word ' is ' in any of its senses. We cannot say : ' the One exists ', or ' the One *is* one ', or even ' the One is ' i.e. is an entity, has that ' being ' which must belong to the subject of any true statement. Later, the various senses of the word ' being ' will be distinguished as occasion arises. The ' being ' which belongs to every entity, whether it exists or not, will be distinguished from ' existence ' in Hyp. V. In the same context it will be observed that a non-existent entity, just because it is an entity, can *have* various characters, though we shall avoid saying that it '*is*' of such and such a character, because that would normally be understood as implying that the subject exists (161C). But here the One is not even an entity.

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[1] This is remarked by Proclus (vi, 251), who adds that Plato could hardly have opened his argument by deducing that the One has no sort of being immediately from the supposition εἰ ἓν ἔστιν, which it would have appeared to contradict (and does in fact contradict).

Neither of the two inferences: (1) that the One does not exist, (2) that the One is not even an entity and therefore cannot be the subject of a true statement that it is one, appears to follow from the previous conclusion that the One is not in time. A Platonic Form is an entity that is not, and does not come to be, in time, and yet has many characters and can be known.[1] Also it will actually be demonstrated in Hyp. V that an entity which does not exist at some time nevertheless is an entity, can have many characters, and can come into existence. At the present stage, however, these distinctions are not yet drawn and they are not strictly observed here. Plato is content to draw a true conclusion from premisses that hardly sustain it. But the premisses themselves are true; and to represent a true conclusion as following from true premisses, which do not by themselves entail it, is not sophistry in the usual sense. It is rather taking a short-cut, to avoid entering on explanations which will be more in place elsewhere. Plato could not explain everything at once; the ambiguities of 'being' are reserved for the later Hypotheses. We shall meet with a few other cases of this sort. It must be remembered that the whole of this second part is avowedly a preliminary exercise in the study of ambiguities. This gymnastic is designed for the students of the Academy. They are expected to compare the arguments of each Hypothesis with those of the others and to find out for themselves the distinctions that must be drawn—in fact, to go through the very process attempted in the present commentary. In the next Hypothesis they will be confronted with a whole series of conclusions which appear contradictory until the ambiguities are detected. In an exercise of this sort Plato did not scruple to introduce, here and there, a *Non sequitur*. It is possible that the phrase, 'if we can trust such an argument as this' (141E, 12), is a hint that formally, although the premisses and the conclusion are true, the reasoning is not entirely trustworthy.

Parmenides ends by asking, 'Can this possibly be the case with the One?' and Aristoteles answers, 'I do not think so.' The purpose is to provide a transition to the next Hypothesis, which will suppose a One that has being and will lead to positive conclusions.

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[1] On the other hand, at *Tim.* 37E, where eternity is contrasted with time, it is said that past and future ('was' and 'will be') are forms of time, appropriate to the becoming which proceeds in time, but 'is' *should* be used of eternal being which is for ever in the same state immovably, and ought not to be used of what is becoming.

Parmenides does not mean that the consequences so far deduced do not follow for the One as defined in the present Hypothesis. They do follow, and they have led to purely negative results. So, if we are to give 'the One' any sense in which true positive statements can be made about it, we must add to its oneness some sort of being. This we proceed to do in the next Hypothesis.

The Neoplatonic Interpretation.—Mention has been made in the Preface of some recent writers who have revived the Neoplatonic interpretation of the Hypotheses. They all agree that the One of Hyp. I is a God, beyond all being (*ἐπέκεινα τῆς οὐσίας*), unknowable, and to be characterised only by negations. This deity is to be identified with the Form of the Good. He is situated '*en un lieu surintelligible*', which Plato has described only in the *Republic* (Wahl, p. 120). For Wundt he is the Form of the Good, the *ἀρχὴ ἀνυπόθετος* (*Rep.* 510B), the Cause of *Philebus* 27B, and 'the Idea of the Idea', i.e. that which is presupposed by every determinate Idea and makes it an Idea. Plato, not Plotinus, is the founder of negative theology. Speiser's view is similar; and he connects the unknowableness of this God beyond being with Socrates' saying that the highest human wisdom is to know that we know nothing. Paci regards this One as an '*unità superessente*' superior in ontological worth to the being which is the object of thought and which comes into view in Hyp. II (p. 113). This unity is a 'transcendent God' (p. 144).

All these writers would, I think, admit that this revelation of mystical doctrine could never have been discovered by anyone who had nothing more to go upon than the text of the dialogue itself. What Parmenides offered to Socrates was a gymnastic exercise, not the disclosure of a supreme divinity. He also said that he would begin 'with himself and his own supposition that there is a One', and Parmenides' One Being was not a god, nor was it 'beyond being'. The language throughout is as dry and prosaic as a textbook of algebra; there is as little here to suggest that the One has any religious significance as there is in the other case to suggest that x, y, and z are a trinity of unknown gods.

The Neoplatonic interpretation rests in the first place on the assumption that, when Plato says that this One has no positive attributes and cannot even 'be' in any sense, he means that it is somehow '*beyond*' or '*above*' being and all other attributes. There is not the slightest hint anywhere in the text to warrant this assumption. It depends entirely on the identification of the One as here characterised with the Form of the Good, and on a mystical construction of the phrase *οὐκ οὐσίας ὄντος τοῦ ἀγαθοῦ, ἀλλ' ἔτι* ἐπέκεινα τῆς οὐσίας πρεσβείᾳ καὶ δυνάμει ὑπερέχοντος (*Rep.* 509B). Thanks largely to the Neoplatonists themselves, such an atmosphere of religious fervour has gathered about Socrates' comparison of the Good to the Sun that it seems almost brutal to suggest a simpler interpretation. But can it be proved that these words mean anything more than that, whereas you can always ask the reason for a thing's existence and the answer will be that it exists for the sake of its goodness, you cannot ask for a reason for goodness; the good is an end in itself; there is no final cause beyond it? This applies to the universe. As Socrates urged in the *Phaedo*, the order of the world should be explained by reference to some good of the whole which will be the ultimate reason (*αἰτία*) why things are as they are. The 'reason' or 'cause' that explains all existence might be described as 'beyond' the existence it explains; and being the good or end of that existence, it will be superior to it in worth. It is quite another matter to say that this cause itself can be identified with a 'One' which has no existence or being of any kind. The Neoplatonising interpreter appeals to Aristotle's statement that 'of those (Pythagoreans and Platonists) who maintain the existence of unchangeable substances (*οὐσίας*) some say the One itself is the Good itself; but they thought its essence (*οὐσία*) lay mainly in its unity'. These 'some' may be identified with Plato and his conservative followers, notably Xenocrates. But the doctrine is not Plotinian.[1] The Good is not here 'beyond being', but an unchangeable substance (*οὐσία*), just as Plato's 'One' is said to be *οὐσία* at *Met.* 987*b*, 22. And so far from being beyond knowledge, the Good of the *Republic* is described in the same context as 'the highest object of knowledge' (*μέγιστον μάθημα*, 505A). This knowledge is the goal of the whole course of the philosopher's higher education. In describing it Plato uses language borrowed from the *ἐποπτεία* of the Eleusinian mysteries, which consisted in the exhibition of cult-symbols and images of the divinities. This revelation had, of course, no resemblance to the 'mystical union' of trance and ecstasy. Nor has any mystic ever suggested that the proper avenue to his supreme experience lies in a fifteen-years course of pure mathematics and dialectic, followed by fifteen years of subordinate office in the State. There is no evidence that either Socrates or Plato ever had that experience which was really the core round which Plotinus constructed his theology. Had any such tradition been known in ancient times, the Neoplatonists would have made the most of it.[2]

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[1] This is pointed out by Mr. A. H. Armstrong in his unpublished dissertation on Plotinus.

[2] The unfortunate suggestion, revived by Burnet, that Socrates when he

On the surface the conclusion of Hyp. I is that if Unity itself, Socrates' *αὐτὸ τὸ ἕν*, is to be understood as bare unity and nothing else at all, then we cannot even say that there is such a thing. Why should this conclusion not be accepted as what Plato means, with the inference he actually draws, that this cannot be a satisfactory account of Unity itself, but we must at least add 'being' to unity, as we proceed to do in the next Hypothesis? We shall then have an *αὐτὸ τὸ ἕν* which does exist, and which might with much better reason be identified with the Good. The equation of the Good with the bare Unity of Hyp. I is in flat contradiction with the text. That Unity has no second character; therefore we cannot say it is good or the Good. It has no sort of being; therefore, if this is the Good, the Good does not exist, is not real, is not even an entity. No one will maintain that Plato could have meant that. The Neoplatonisers may fairly be asked to explain why he said that you cannot truly assert that the One *is* anything whatsoever, when he meant that you can truly assert that it *is* beyond being, and *is* good, and a god, and 'the Idea of the Idea'.

The Neoplatonists make the further assumption that the Good of the *Republic* is the supreme god of Plato's theology, superior to the divine *Νοῦς*, which they locate in Hyp. II. Nothing approaching satisfactory evidence for this equation can be found in Plato's works and it is hard—perhaps impossible—to reconcile with the *Timaeus* and the *Laws*. It may be added that Aristotle, if anyone, must have understood the *Parmenides* correctly; and to his far from mystical temperament it would have seemed the worst sort of nonsense to say of the supreme God what Plato does say of the One, that he cannot have any sort of being and nothing true can be said about him. Such a theology would surely have been denounced in the *Metaphysics* and elsewhere. This is a case in which the argument from silence has considerable force.

The most that can be said for the Neoplatonist interpretation is that Unity is later on (158D) represented as the principle of Limit, which when combined with the Unlimited factor produces a plurality of limited things; and Limit is associated, in Pythagorean and Platonic thought, with Goodness. But in Hyp. I and IV this principle of unity is supposed to be separated in complete abstrac-

stood absorbed in thought for a day and a night at Potidaea, was enjoying a 'beatific vision' in some sort of trance, is plainly contradicted by Alcibiades' own words at *Symp.* 220C. Socrates had 'begun to *reflect upon something* (συννοήσας τι) and stood there *considering* it (σκοπῶν), and when he could *make no headway* he would not let it go, but still stood *trying to find* the answer (ζητῶν)'. Word went round that Socrates was standing '*thinking* about something' (φροντίζων τι). The essence of the 'mystical union' is that it transcends all discursive thought.

tion from the second element, with the consequence that no one limited thing can exist. Such a helpless abstraction cannot be identified with the Good of the *Republic* or with a divinity.[1]

Setting aside the Neoplatonic view, we may now return to consider the bearing of the argument so far upon the earlier part of the dialogue. It is plain that the final upshot of Hyp. I is as unacceptable to Parmenides and Zeno as it is to Socrates. It has been proved that the One of Parmenides, if it is to be (as he said) absolutely one, unique and without parts, cannot have a whole series of attributes which Parmenides assigned to it : it cannot be a limited sphere filling all space and remaining at rest ; it cannot even possess existence or a name, for a name (as the Eleatic argues against Parmenides in the *Sophist*, 244D) must be a different thing from the thing which has that name. And, instead of being the sole object of rational thought, it cannot be known in any way.[2] As for Zeno, his proposition that ' what is one cannot also be many ' has turned out to be a refutation, not a defence, of Parmenides. It is precisely the doctrine that leads to all these fatal results.

At the same time this Hypothesis contains a lesson for Socrates, who had said that he would be surprised if anyone could show that ' what is simply Unity itself ' (*ὃ ἔστιν ἕν, αὐτὸ τοῦτο*) is also many (129B). Parmenides has now shown him that, if this phrase means a Form, Unity, which is to be just unity and nothing else and so is to exclude any sort of plurality, then nothing whatever can be truly said about such a Form, not even that it exists or is one. The moral is that, when any Form is described as ' just what it is ' and as ' just by itself ' (*αὐτὸ καθ' αὑτό*), that does not mean that it is completely isolated from all ' combination ' with other Forms. Every Form must ' partake of ' Existence and Unity at least ; for it can be truly asserted of every Form that it exists and is one. This is the conclusion that emerges, if we apply the argument of this Hypothesis to the Form, Unity itself (αὐτὸ τὸ ἕν). If any Form excludes plurality, it might be expected to be the Form, Unity. But Parmenides has now shown that no such Form can exist at all or be an object of knowledge, unless the contraries, one and many, are in some sense combined in it. It thus appears that the union of contraries in the Forms themselves, which Socrates asked to be demonstrated (129E), is just as necessary as the union of contraries in sensible things, asserted by Socrates himself as destroying Zeno's underlying assumption : 'one thing cannot also be many', 'what is like cannot also be unlike', etc. In this way, by taking the bare 'One' which can equally well stand for the One of Parmenides and for Socrates' Form, Unity itself, Plato has, with extraordinary ingenuity, contrived at once to expose the inconsistency of Parmenides and to clear up an ambiguity in his own theory. On this interpretation the conclusions so far reached become relevant to the problems raised in the original discussion between Socrates and Zeno.

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[1] A detailed criticism of the Neoplatonic interpretation will be found in Appendix E to Professor Taylor's Translation.

[2] Friedländer, *Platon. Schriften*, 471, has seen that Plato closely follows the lines of Parmenides' reasoning and denies to his One attributes which Parmenides ascribed to it as well as the attributes he rejected. This was also pointed out by Jackson, *Journal of Philol.* xi, 310. A friendly critic has objected that it is a strange procedure to make Parmenides expose the weaknesses of his own system. I can only reply that the criticisms are not expressed in the text ; they are merely inferences which the reader can draw for himself, and some of them are identical with objections openly stated by the Eleatic stranger in the *Sophist*. It does not seem to me impossible that Plato should represent Parmenides as supplying material which could be used for the correction of his own doctrine.

None of the interested parties, as we have seen, can accept the present situation with equanimity. If Parmenides' One and Socrates' Unity itself (or any other Form) are to be rescued from self-destruction, both must be something more than 'just one and nothing else'. The least that we can add is 'being'. We shall then have a One that *is* and can be truly said to *be* one.

HYPOTHESIS II

In the earlier sections of Hyp. I it has appeared that nothing like the Pythagorean evolution, starting from an original One and leading to the sensible body existing in space and time, is logically conceivable, if the One is not also 'many' or a 'whole of parts'. Parmenides had disposed of the Pythagorean scheme precisely by asserting that a One Being has no parts and must be unique : it does not contain a manifold, and no other thing can ever come out of it. Plato now intends to deny this dogma and to restore the possibility of a (logical) evolution following the Pythagorean lines, with the refinements of his own more advanced thought.

As before, the opening paragraph of the Hypothesis completely defines the conception we need to start with. This is the conception of 'a One which is' (ἓν ὄν), or something which has the two attributes of unity and being, and for the present no further attributes. We shall then be able, first, to deduce simply from that conception the unlimited plurality of numbers and the unlimited plurality of things that are (ὄντα). Next we shall see that a One which has being is such that it *can* have the whole series of characters which were rejected in Hyp. I. We can clothe it with extension, shape, existence as a physical body in space, the capacity for motion, change, and rest, and so on. All these possibilities will follow from the mere addition of ‘ being ’ to ‘ unity ’ in the construction now put upon the hypothesis, ‘ If a One is ’.

142B–C. *If the One has being, it is One Entity, with both unity and being*

142B. Shall we, then, go back to our hypothesis and reconsider it from the beginning, in the hope of bringing to light some different result ?

‘ If a One is ’, we say, we have to agree what sort of consequences follow concerning it. Start afresh, then, and consider. If a One *is*, it cannot be, and yet not *have* being. So there will also be the being which the One has, and this is not the same thing as the One ; otherwise that being would not be *its* being, nor would it, the One, *have* that C. being, but to say ‘ a One *is* ’ would be tantamount to saying ‘ a One (is) *one* ’.[1] But in fact the supposition whose consequences we are to consider is not ‘ if a One (is) *one* ’, but ‘ if a One *is* ’. This implies that ‘ is ’ and ‘ one ’ stand for different things. Thus the short statement ‘ a One is ’ simply means that the One has being.

It is not explained what sort of being this ‘ One Being ’ has. Existence in time is not meant, for that is added at a later stage. It seems best to avoid the word ‘ existence ’ as suggesting the existence into which and out of which pass the things that become and perish in time. ‘ Being ’ is to be taken in the widest sense in which we speak of an ‘ entity ’. This ‘ being ’ is described at 161E as belonging to anything about which any true statement can be made, including the statement that it does not exist. Hyp. V is devoted to considering what can be said about a non-existent entity. A One Entity (ἓν ὄν), then, is a subject of which we can assert the two truths : (1) that it is one, or has unity, and (2) that it is, or has being. The expression, for the present, will cover anything that in this sense ‘ is ’.

From this simple conception of One Entity all the deductions of the next two sections can be drawn, without the addition of any further determinations. It will be argued (1) that by dwelling on the implications of this conception our thought can derive from it the unlimited series of numbers. Further, (2) there will be as many entities (ὄντα) as there are numbers, and each of them will be one entity. Only then shall we begin to add the string of determinations that were rejected in Hyp. I.

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[1] ἓν ἕν. In Greek the word ‘ is ’ (the ‘ copula ’) can be omitted, as here. ἰε ἕν ἓν would be a more accurate expression than εἰ ἕν ἐστιν for what *was* our supposition in Hyp. I.

142C–D. *A ' One Entity ' is a whole of parts (both one and many)*

The first step is to assert of a ' One Entity ' what was denied by the very definition of the absolute One of Hyp. I—that it is many, in the sense of being a whole of parts. The next words indicate that what has gone before is the fresh definition, now to be followed by the deduction of consequences.

> 142C. Let us, then, once more state what will follow, if a One is.
> Consider whether this supposition does not necessarily
> D. imply that the One is such as to have parts. That follows
> in this way. Since ' is ' is asserted to belong to this *One*
> which is, and ' one ' is asserted to belong to this *Being*
> which is one, and since ' *being* ' and ' *one* ' are not the same
> thing, but both belong to[1] the same thing, namely that
> ' One which is ' that we are supposing, it follows that it is
> ' One Being ' as a whole, and ' one ' and ' being ' will be
> its parts. So we must speak of each of these parts, not
> merely as a part, but as part of a whole.
>
> Therefore, any ' One that is ' is a whole and also has parts.

We have already (p. 116) noted that Plato uses the word ' part ' (μέρος, μόριον) where we should speak of elements or characters or aspects. The statement above, that any ' One Entity ' has two parts, its unity and its being, supports our supposition that here at the outset we are to conceive it as consisting of these two elements only. They are sufficient to make it a whole or complex, and so a One which is also more than one, ' many '.

142D–145A. *A One Entity (having parts) is indefinitely numerous and also limited*[2]

In Aristotle's account of the Pythagorean generation of numbers from the original One, Limit and Unlimited were the first pair of

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[1] τοῦ αὐτοῦ δὲ . . . τοῦ ἑνὸς ὄντος, possessive genitive with the preceding ἔστι. The genitive in τὸ ἔστι τοῦ ἑνὸς ὄντος λέγεται above cannot be governed by λέγεται, but must also be possessive, unless some parallel can be found for λέγεσθαι with genitive meaning ' to be predicated of '. The point is that two *different* attributes belonging to the *same* subject (the ἓν ὄν) must be two *parts* of one *whole*.

[2] Throughout this section Burnet's division of paragraphs is incorrect and misleading.

Opposites, whose union gave rise to the arithmetical unit and numbers (p. 6). The alternative, limited or unlimited, followed at the same point in Hyp. I, immediately after the definition of the One which was not many and had no parts. There only the negative inference was possible : that such a One could *not* have limits, for there could be no distinction of beginning, middle, and end ; and the next inference was that it could not be a geometrical magnitude having a shape. Number was already excluded by the definition, which denied any plurality. In the present Hypothesis, with its wealth of possibilities, number and geometrical magnitude (shape) are separately considered, number, of course, being prior.

First, the existence of the unlimited series of numbers is deduced from the mere conception of ‘ One Entity ’. We saw that the Eleatics objected to the Pythagorean derivation of numbers, a plurality of ones, from the original unit. Zeno sought to prove that the existence of any plurality involved contradictions. Plato here shows that the existence of number follows immediately from the Parmenidean hypothesis itself, understood as positing a One that is not merely one but also has being. There is nothing irrational or illogical is allowing our thought to advance, by the processes here indicated, from a One that has being to any number of ones that have being. In this revised form Plato restores the Pythagorean evolution of numbers from the One. The primary pair of opposites, Limited and Unlimited, here come into view.

There are two alternative methods of procedure : (*a*) by division, (*b*) by addition and multiplication. Both lead to the conclusion that a One Being is unlimited in multitude or indefinitely numerous (*ἄπειρον πλήθει*). Finally, it will be shown that a One Being, considered as a whole, must be limited.

(*a*) We begin with the method of division. From this point of view the One Being is a whole, capable of unlimited division into parts.

142D. Again, take each of these two parts of the One Being—
E. its unity and its being : unity can never be lacking to the
part ‘ being ’, nor being to the part ‘ unity ’.[1] Thus each
of the two parts, in its turn, will possess both unity and
being ; any part proves to consist of at least two parts,
and so on for ever by the same reasoning : whatever part
we arrive at always possesses these two parts ; for a ‘ one ’
always has being, and a ‘ being ’ always has unity. Hence
143. any part always proves to be two and can never be one.

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[1] The sense here is certain, though the reading is dubious. Cf. 144E, *οὔτε γὰρ τὸ ὂν τοῦ ἑνὸς ἀπολείπεται οὔτε τὸ ἓν τοῦ ὄντος.*

143. In this way, then, what is ' One Being ' must be unlimited in multitude.

This first method applies to ' One Being ' the conception of infinite divisibility in a peculiar manner. The reasoning appears to be fallacious and has been condemned as such, owing to the ambiguity of the term ' part '. Infinite divisibility is commonly applied to magnitudes. If our ' One Being ' were a magnitude, we could imagine it endlessly divided into parts (smaller magnitudes) each of which would *be* and be *one*. But if (as we are supposing) the ' One Being ' is simply ' one entity ' of whatever kind, it seems illegitimate to regard its being and its unity as parts resulting from division and capable of subdivision. The further determination whereby it acquires extension and shape is not added till the next section.

The sort of division here intended can only be the mental act of distinguishing the two elements in ' One Entity '.[1] If we now fix our thought upon either of these elements, say the ' unity ', we shall once more see it as a ' one entity ', having a unity and a being of its own. The process can now be continued indefinitely : we shall never reach an element that *is* not an element or is not *one* element. So interpreted, the meaning is that, if you start by considering the bare notion of ' One Entity ' as a complex with two distinguishable elements, there is nothing to prevent your thought from advancing, without any further aid, to the conception of unlimited multitude.[2] It is thus that we must understand the conclusion stated, that ' a One Being is unlimited in multitude '. The reasoning is valid against Parmenides, who declared that a ' One Being ' must be indivisible, and yet asserted that ' what can be thought can be '. We now find that our thought *can* advance without limit in this process of distinguishing, and there is no ground for holding that there is anything *irrational* in the notion of multitude and even of unlimited multitude. The reasoning is also valid *ad hominem*, in that Parmenides spoke of his One Being as an extended continuous magnitude with spherical shape. If it has these properties, it must be infinitely divisible in the ordinary sense.

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[1] This mental act may be compared to the act of discerning two specific differences contained in a generic concept, as practised in the method of Division (διαίρεσις).

[2] There is something in this unaided advance of thought that recalls the account of Recollection at *Meno*, 81D : ' Since all reality (the world of Forms and of mathematical truth) is akin, there is nothing to prevent a man who has been reminded of only one thing—learnt it, as people say—from discovering all the rest for himself.' All truths are so connected that the chain can be followed, by pure reasoning, from any one link that is grasped.

(*b*) The alternative method reaches the same conclusion by way of addition and multiplication, and explicitly deduces the existence of the number series. From this standpoint we need a One that can stand as a unit, to which other units—other 'ones'—can be added. For numbers three terms are considered necessary, so as to provide the first unit, the first even number, and the first odd. These are provided by taking (1) the 'One' which is said to have being in the expression a 'One which is' (*ἓν ὄν*), (2) the being which it has, and (3) the term 'different', a character which is immediately perceived to belong to both these entities, for they could not otherwise be distinguished.

143A. We may also proceed in another way, as follows. We are saying that the One has being: that is why it *is*; and it was for that reason that a 'One which is' was seen to be a plurality. Now take just this 'One' which we are saying has being and conceive it just by itself alone apart from the being which we say it has. Will this 'One' itself be found to be merely one or also a plurality?[1] Consider:
B. the 'One' itself and its being must be *different* things since the One is not being, but, as One, *has* being. If, then, the One and its being are each different from the other, it is not in virtue of being one that the One is different from the being, nor is it in virtue of being 'being' that the being is other than the One: they differ from one another in virtue of being *different* or *other*. Thus (the term) 'different' is not identical with either 'one' or 'being'.

C. Now suppose we take a selection of these terms, (say) 'being' and 'different', or 'being' and 'one', or 'one and 'different'; in each case we are selecting a pair which may be spoken of as 'both'. I mean: we can speak of 'being', and again of 'one'. We have thus named each member of a pair. And when I say 'being and one' or 'being and different', or 'different and one', and so on in every possible combination, I am in each case speaking of
D. 'both'. And a pair that can properly be called 'both' must be *two*. And if a pair of things are two, each of them must be *one*. This applies to our terms: since each set forms a couple, each term must be one. And if so, then, when any one is added to any pair, the sum will be *three*.

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[1] The unity of the One Being, even in isolation from its being, still must have two distinct characters: *oneness* and *difference* from being. 'Being' also will have two characters: *being* and *difference* from oneness. Hence *difference* is a third distinct term.

143D. And three is odd, two even.[1] Now if there are two, there
E. must also be *twice times*, if three, *three times*, since two is
twice times one and three is three times one. And if there
are two and twice times, three and three times, there must
be *twice times two* and *three times three*. And, if there are
three which occur twice and two which occur three times,
there must be *twice times three* and *three times two*. Thus
144. there will be even multiples of even sets, odd multiples of
odd sets, odd multiples of even sets, and even multiples
of odd sets. That being so, there is no number left, which
must not necessarily be.

Therefore, if a One is, there must also be number.

Thus, from the simple consideration of ‘ One Entity ’, with its two parts and the difference between them, we have derived the unlimited plurality of numbers. Each of the three terms is ‘ one entity ’ and can thus be treated as a unit ; and by adding and multiplying these units we can reach any number (plurality of units), however great.[2]

The next point is that, since all the units (‘ ones ’) forming numbers are themselves entities (ὄντα), the same process that yields an unlimited plurality of units or ‘ ones ’ also yields an unlimited plurality of entities or ‘ beings ’. We have not merely numbers, a plurality of *ones* (πολλά), but many things that *are* (πολλὰ ὄντα), and in fact an ‘ indefinite plurality of things that are ’ (πλῆθος ἄπειρον τῶν ὄντων). Thus the ‘ being ’ of a One Being is indefinitely multiplied by the same process whereby its unity was indefinitely multiplied in the previous argument.

144A. Now, if number is, there must be many things, and indeed
an unlimited plurality of things, that *are* ; for we must
admit that number, unlimited in plurality, also proves to
have being. And if all number has being, each part of
B. number must have being also. Thus being is distributed

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[1] Note that Plato drops the archaic Pythagorean identification of the Odd with Limit, the Even with Unlimited (p. 6), so far as numbers are concerned. All numbers are limited.

[2] The objection that prime numbers cannot be obtained by multiplication is invalid, since Plato evidently includes addition and starts with that when he *adds* one term to another to make two, and two to one to make three. Moreover, primes were sometimes regarded as odd multiples of an odd number, 1 being treated for this purpose as odd : $5 = 5 \times 1$. Theon, p. 23, 14, *καλοῦνται δὲ καὶ περισσάκις περισσοί (οἱ πρῶτοι ἁπλῶς καὶ ἀσύνθετοι ἀριθμοί).*

> 144B. throughout all the members of a plurality of beings, and is
> lacking to none of these beings from the smallest to the
> greatest ; indeed it is nonsense to suggest that anything
> that *is* should lack being. Thus being is parcelled out among
> beings of every possible order from smallest to greatest ;
> C. it is subdivided to the furthest possible point and has an
> illimitable number of parts. So its parts form the greatest
> of multitudes.
>
> Again, among all these parts there cannot be any which
> *is* part of being and yet not *a* (one) part : if it *is*, then, so
> long as it is, it must always be some *one* part ; it cannot
> be *no* (not one) part. Consequently, unity must belong to
> every part of being, and be lacking to none, smaller or
> greater. And unity, being one, cannot be in many places
> D. at once as a whole. And if not as a whole, it must be as
> divided into parts ; only so can it be present to all the
> parts of being at the same time. Further, that which is
> divided into parts must be as many as its parts. So we
> were wrong to say just now that being was distributed into
> the ' greatest ' multitude of parts. Its parts are not more
> numerous than those into which unity is distributed, but
> E. equal in number ; for nothing that *is* lacks unity, and
> nothing that is *one* lacks being ; the two maintain their
> equality all through. It appears, then, that unity itself
> is parcelled out by being, and is not only many but indefinitely numerous.
>
> Thus not only is a ' One which is ' a plurality, but unity
> itself is distributed by being and is necessarily many.

With this conclusion it is interesting to compare Aristotle's proof that there are as many species of being as there are of unity. That which *is* (τὸ ὄν) and that which is *one* (τὸ ἕν) are the same thing and a single nature by virtue of the fact that each implies the other in the same way as ' principle ' and ' cause ' imply one another, though in definition they are different. Thus ' *one* man ' (εἷς ἄνθρωπος), ' he who *is* a man ' (ὢν ἄνθρωπος), and ' a man ' (ἄνθρωπος) are the same thing : nothing is added if we substitute either of the two former expressions for ' a man ' ; even if a man comes into existence or ceases to exist, he does not gain or lose either his ' being ' (in this sense) or his unity. Accordingly, ' that which *is* ' (τὸ ὄν) and ' that which is *one* ' (τὸ ἕν) denote the same thing (*Met.* 1003*b*, 22).

It only remains to point out briefly that any One Entity must also be limited, in so far as it is one whole, containing its parts.

144E. Further, since its parts are parts of a whole, the One, in respect of its wholeness, will be limited. For the parts are
145. contained by the whole; and a container must be a limit.

Therefore, a 'One which is' is both one and many, whole and parts, limited as well as indefinitely numerous.

The above argument is a brilliant refutation of the Eleatic thesis, that a One is, and yet a plurality of beings (*πολλὰ ὄντα*) is irrational. We have proved that an indefinite plurality of entities, so far from being inconsistent with the assertion of a One Being or of the unity of all being, can actually be deduced directly from that assertion, by allowing our thought to follow out its implications. And Zeno's dogma that what is one cannot also be many is directly contradicted: anything that *is one* must be at least two, as having two parts or elements, its oneness and its being; and indeed three, if we count the difference between these as a third character necessarily present. The same argument holds against Socrates' suggestion (129B) that the Form, Unity itself (*αὐτὸ τὸ ἕν*), cannot be many. If that Form (or any other Form) exists, it has its peculiar nature (unity or whatever it may be) and also its existence. Thus it 'partakes of' or 'combines with' a *different* Form, Existence. At least three Forms are thus involved in the recognition of any Form as existing; and these three characters are inseparably combined in any one Form. Given one existing Form, it must always be true that (1) the Form is *what* it is, has a nature of its own, (2) the Form *exists*, and (3) its nature is *different* from its existence. Thus 'Unity itself' is a whole or complex with at least three parts or elements, and so is many.

The statement that 'Unity, being one, cannot be in many places (*πολλαχοῦ*) at once as a whole' is meant to recall Parmenides' first argument against participation (131A). If we take Unity here to mean the Form, Unity itself, this Form, as an undivided whole, cannot be 'in' any one thing in a way that would imply that it was used up by that thing. Unity must be somehow divided and distributed among many things; for we have proved that the mere assertion of a One Being at once implies that there are many beings, each of which *is one* or partakes of Unity. To deny this would entail all the negative consequences of the first Hypothesis and annihilate all discourse. We must not, therefore, shrink from the second horn of Parmenides' dilemma, or be afraid (as Socrates was, 131C) to say that a Form can be portioned out among things and still be one. In some sense this is demonstrably true, though not in the sense Parmenides suggested, that the Form is cut up into pieces, each of which would be smaller than the whole.

The above demonstrations are of great importance for the sequel. They have established two conceptions, (1) unlimited multitude and (2) indefinite plurality, as against Parmenides' dogma that a One Being must be (1) indivisible and (2) unique.

(1) By way of division we have justified the notion of a One Entity considered as a whole divisible without limit into parts, each of which will itself be *one* part when the division has been made. On the other hand, no one part that we reach will ever be an indivisible unit; 'any part proves to consist of two parts, and so on for ever by the same reasoning' (142E). When the One Entity has been clothed with further attributes, so as to become an extended magnitude and finally a physical body in space, it will retain this property of infinite divisibility in the ordinary sense, applicable to continuous quantity.

Now, in our study of the Pythagorean evolution, we saw that Alexander Polyhistor's summary opens with the derivation of the Indefinite Dyad from the One. The One was the first principle of all things. 'From the One came the Indefinite Dyad, as matter for the One, which is cause; and from the One and the Indefinite Dyad came numbers.' Whether or not this was a feature of the original Pythagoreanism, it is certainly a feature of the later Platonism, and it is indicated in the passage before us.[1] We have here the picture of a One Being regarded as an all-inclusive whole and, as such, one and limited, and also as possessing continuous 'being'. So far it resembles Parmenides' One Being. The difference, however, is that our whole is divisible, and the whole itself and every part, though one, are also always two and so further divisible. The whole and every part thus consist of two ever-present factors or elements: Limit or unity and Unlimited multitude. This multitude only becomes a plurality of discrete units when actually divided. In itself it is what Plato calls the Indefinite Dyad, because, as he says here, it 'always proves to be two and never is one'. It will be convenient to use the word 'multitude' for this factor, and reserve 'plurality' for any number of discrete parts or units resulting from actual division. In some of the later arguments in this Hypothesis and in some of the other Hypotheses we shall encounter this conception of the Unlimited as the infinitely divisible factor or material element. As multitude, it will be called

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[1] Cf. Ar., *Met.* 1081*a*, 14: (according to Plato) 'number consists of the One and the Indefinite Dyad; and these are called the principles or elements of number.' It appears that the 'being' which is distributed or parcelled out by the limiting factor of unity actually is the Indefinite Dyad or great-and-small. We may identify this unlimited factor or 'other' with the 'being' which, in combination with unity, constitutes a 'One Being' (ἓν ὄν).

' the Others ', in contrast with ' the One ' considered as the element of unity or limit. The two factors combined constitute one limited thing (πεπερασμένον).

(2) From the second point of view the derivation of numbers, pluralities of discrete units, has disproved Parmenides' dogma that the One Being is necessarily *unique.* By way of addition and multiplication we have justified the notion of a One Entity considered as one unit (the unit of number) with any number of other units alongside it and capable of being added to it to make up any plurality of units, however numerous. Since each of these other units is just as much a one *being* as the first unit, we have rejected the Eleatic dogma that there cannot be a plurality of things that *are,* existing alongside one another. From this point of view ' the Others ' will mean these ' other ones ', which can be invested with all the further attributes now to be added.

These two meanings of ' the Others ', as (1) the unlimited factor requiring to be limited by the One (unity), and (2) other ones alongside anything we choose to call ' the One ', will be distinguished and described in the complementary Hyp. III, which deals with the consequences for the Others of our present supposition. We shall presently have occasion to invoke both conceptions in explaining arguments which pass from one sense to the other. Meanwhile we may note that they correspond to those two conceptions of quantity, as continuous or discrete, of which Zeno availed himself in his dilemmas.

145A–B. *A One Entity (being limited) can have extension and shape*

Having deduced a plurality of entities from the mere conception of ' One Entity ', we can now consider whether it is possible to clothe such entities with those further attributes which we had to deny to the bare unity of Hyp. I. These attributes are taken in the same logical order, beginning with extension and shape. We pass, as before, from number to geometrical figure. This was the next stage in the Pythagorean evolution : the unit of number was also the point, from which proceeded lines, surfaces, and solid figures.

From either of the two points of view our One Entity is a whole. We regarded it first as a continuous whole, infinitely divisible into parts. As discrete plurality, although the number series is endless, any *one* number, however great, is a limited plurality or total, and so likewise a whole. If we now add to this notion of a limited whole the attribute of extension, our ' One Entity ' will become more concrete as ' one magnitude '. And it will be true of any one magnitude, however great, that it has extremities : any *one* line must have a beginning and an end ; any *one* plane or solid figure must be bounded by lines or surfaces. As 'one magnitude', the One Entity will also retain its infinite divisibility and so consist of indefinitely numerous parts. This property is only hinted at in the statement that it will have a middle, as well as an end and a beginning: any one magnitude can be halved; and since each half will itself be one magnitude, the halving can be repeated without limit.

145A. Since it is limited, then, it will have extremities; and if a whole, it will have beginning, middle, and end. A thing cannot be a whole without all these three; if any one of them is lacking it will no longer be a whole.[1] Thus the
B. One will have beginning and end and middle. But the middle can only be what is equidistant from the extremities.

So a One, such as we have described, will have some shape, straight or round or a mixture of both.

At this point, where we have passed from number to magnitude, the superficial form of the argument becomes slightly misleading. In Hyp. I we could directly infer the negative conclusions, that a One which was merely one could not have shape, or position in space, or motion and rest. But you cannot simply deduce from the conception of 'One Entity' that anything that is one entity *must* have extension and shape, or position, or motion and rest. Obviously there are entities, such as numbers and Platonic Forms, which have none of these attributes. If my principles of interpretation are sound, we must understand the statement that 'the One Entity, being limited, *will have* shape' as meaning that the attribute of extension *can*, without any illogicality, be added[2]: there is no reason why we should not endow it with this further determination, though there was good reason for not so endowing the bare unity of Hyp I. I understand these sections as describing a sort of evolution by process of thought, starting simply from the 'One Entity' which has been shown to have both limit and indefinite multitude, and arguing that such a thing can perfectly well be invested with these further attributes, successively, until we reach the conception of a physical body situated in space and capable of motion and rest.

If this is so, the Platonic Parmenides is reproducing the manner of the real Parmenides, who professed to deduce all his conclusions by rigid reasoning from the same premiss, 'a One which is'. Here some of the same conclusions are deduced, others disproved. In particular, Parmenides had tacitly assumed that the One Being is extended, and then declared that it must be 'like a well-turned Sphere', with a centre and extremities. Plato makes the same tacit assumption, but points out that 'one magnitude' need not be a sphere, but may have any shape, 'straight or round or a mixture of both'. Democritus' conception of atoms having every sort of shape is just as logical as Parmenides' sphere.

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[1] Ar., *de caelo*, 268*a*, 10, 'As the Pythagoreans say, the All and all things are determined by the number three; for end, middle, and beginning give the number of the whole, and their number is the triad.'

[2] In the present paragraph Plato uses the optative, ἔχοι ἄν, which can mean 'would have' or 'might have'; but in the next he uses the future, and in the paragraph on motion the equivalent of the present indicative.

145B–E. *A One Entity (being an extended magnitude) can be both in itself and in another*

An entity 'having these properties' (*οὕτως ἔχον*), i.e. being a geometrical magnitude, can now be given position in space, as a physical body. This corresponds to the transition, 'from geometrical solids, sensible bodies', in the Pythagorean evolution. As the sum of all its own parts, the One will be contained in itself as whole. As a whole, if it is somewhere (as we are now assuming), it must be 'in something else'.

145B. Then, if it has these properties, it will be both (*a*) in itself and (*b*) in another.

(*a*) Each part is, of course, in the whole; none is outside the whole. And all the parts are contained by the whole.
C. Now, the One is all its own parts, and neither more nor less than all. And the One is also the whole. Accordingly, since all the parts are in a whole, and the One is both all the parts and the whole, and all the parts are contained in the whole, the One must be contained by the One. In this sense it follows that One must be in itself.

(*b*) On the other hand, the whole is not in the parts, neither in all the parts nor in any part.
D. If it were in all, it would have to be also in one part; for if there were some one in which it was not, it could not be in all. But if this one part is one among all the parts, and the whole is not in this one, we can no longer say it is in all the parts.

If the text here, as printed by Burnet, is sound and complete, the argument is somewhat elliptical. The full form would be:

If the whole is in all the parts, it must be in one part; for if there were some one part in which it was not, it could not be in all. (But it is obviously absurd that the whole should be in one part.) On the other hand, if the whole is *not* in this one part, which is one among all the parts, then the whole will not be in all the parts (but only in some of them).

Then follows the proof that it cannot be in some (but not all) of the parts.

145D. But neither is it in *some* of the parts: if the whole were in some of the parts, the greater would be contained in the less, which is impossible.

If, then, the whole is not in several of its parts, nor in
one, nor yet in all, it must be either in something else or
E. nowhere at all. But if nowhere at all, it would be nothing;
whereas it is a whole and so, since (as a whole) it is not in
itself, it must be in something else.

Thus as a whole the One is in something else; as all the parts it is in itself; and thus the One must be both in itself and in another.

The question whether this argument is fallacious or not depends on the way in which we define 'whole', 'all the parts', and 'in'.[1] Aristotle, enumerating the ways in which one thing is said to be 'in' another, recognises a sense in which the whole *is* in the parts, 'for the whole is not something over and above the parts' (*Phys.* 210*a*, 16). Plato points out that in the sense in which the parts are *in* the whole, viz. inside it, the whole is not in any part nor yet in all of them, but 'in' something other than itself and its parts, if it is anywhere at all; and that this sense is legitimately applied to a whole such as we are now considering, which is a magnitude having extension and shape.

In the *Timaeus* (52B) where space is described, Plato expressly says that it is a delusion to suppose that 'what is not somewhere in earth or heaven is nothing'. This statement is true only of the images of the eternal realities. 'It is proper to an image that it should come to be in something else (ἐν ἑτέρῳ τινί), clinging in some sort to existence, on pain of being nothing at all'. This 'something else' is space; and the same phrase in our passage will bear the same meaning. So the whole paragraph applies only to physical bodies; and this statement shows that the attribute of position in space is now added to the 'one extended magnitude' of the preceding section.

It is perhaps significant that the axiom, 'whatever exists must be somewhere' or 'in something', occurs both in a fragment of Zeno and in Gorgias' imitation of Zeno. Gorgias argued that an unlimited being (i.e. an unlimited body) cannot be either in itself

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[1] The *Theaetetus* (203E ff.) discusses whether the whole is, or is not, the same as 'all the parts'.

(*ἐν αὑτῷ*) or in something other than itself (*ἕτερον*), namely place (*τόπος*), and concluded that it was nowhere, and ‘ if it is nowhere it does not exist ’ (frag. 3 = Sext, *adv. math.* VII, 69–70). This at once suggests that the antithesis, ‘ in itself ’ or ‘ in another ’, like the other pairs of contraries, is taken by Plato from one of Zeno's arguments against the existence of a plurality. At any rate the axiom occurs in Zeno's proof that place (*ὁ τόπος*) does not exist.[1] According to Simplicius (*Phys.* 562, 1) Zeno ‘ put the question as follows :

> If place exists, in what will it be ? For *whatever exists is in something*, and what is in something is in a place. Place, therefore, will be in a place, and so on for ever. Therefore place does not exist.'

Comparison with Gorgias' argument suggests that this may have figured in one of Zeno's dilemmas disproving a plurality of things. Here is the gist of Gorgias' argument, the points being merely rearranged to fit the course of what I conjecture to have been Zeno's dilemma :

SUMMARY OF GORGIAS' ARGUMENT	ZENO'S ARGUMENT (?)
If what-is is unlimited, the unlimited must be somewhere : either (*a*) in itself or (*b*) in something different.	If things are many, each of them must be somewhere : either (*a*) in itself or (*b*) in another.
But (*a*) if it is in itself, the same thing will be both container and contained, and what is will be two : place and body ; for place is container, body contained. But this is absurd.	But (*a*) if it is in itself, it will be both container and contained, and one thing will be two : place and body. But what is one cannot be two.
And (*b*) if it is in something else, it cannot be unlimited ; for the container is greater than the contained, and nothing is greater than the unlimited.	And (*b*) it cannot be in another, namely its place ; for if place exists, place will be in a place, and so on for ever. But this is absurd. Place, therefore, does not exist.
Therefore what-is, if unlimited, is nowhere ; and what is nowhere is nothing.	Therefore, if things are many, they are nowhere, and what is nowhere is nothing.

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[1] [Ar.] MXG., 979*b*, 22, asserts that Gorgias was here following Zeno's argument about place : *τὸ δὲ ἄπειρον οὐκ ἂν εἶναί ποτε. οὔτε γὰρ ἐν αὐτῷ οὔτ' ἂν ἐν ἄλλῳ εἶναι· δύο γὰρ ἂν οὕτως ἢ πλείω εἶναι, τό τε ἐνὸν καὶ τὸ ἐν ᾧ· μηδαμοῦ δὲ ὂν οὐδὲ εἶναι κατὰ τὸν Ζήνωνος λόγον περὶ τῆς χώρας.*

If Zeno did argue in some such way, then Gorgias saw that a similar argument could be used to show that the Eleatic One Being, if it were unlimited (as Melissus declared), could not exist. This conjecture may be supported by comparison with a later passage (150E–151A), where Plato repeats two axioms, both assumed by Gorgias in the argument quoted above. One is that 'whatever exists must be somewhere'. This Plato has accepted in our passage as true of physical bodies. The other is that 'the container is greater than the contained'. This is asserted at 150E; but there whole and parts are, perhaps, differently conceived. It is not true, nor is it here asserted, of the whole physical body and the parts of which it actually consists. Nor is it true of space, considered as the place in which *all* body is. Neither Parmenides nor Plato believed in empty space extending beyond the boundary of the physical world. Space is the 'room' (χώρα) in which body is, not a vacancy partly occupied by body. The room occupied by a body is called 'something else', because it is not the inherent attribute of extension, but, as Gorgias says, a second thing, the place in which a body is, and from which it might move to another place, or at least *in* which it may move. There is an implied criticism of Parmenides, who had treated his One Being as a magnitude filling all space, but had refused to recognise that then (as Gorgias observed) there will be two things: place and body.

145E–146A. *A One Entity (being a physical body in space) can have motion and rest*

A thing which 'is of this character' (οὕτω πεφυκός) that we have just given it, will be capable of motion and rest. In Plato's curriculum of mathematical sciences, after arithmetic and plane and solid geometry comes pure 'astronomy', the theory of the local movement of bodies in three dimensions (φορὰ βάθους, *Rep.* 528E). At this stage the deductive form of argument becomes more embarrassing. It is possible to deduce that a thing which is always 'in itself', is, in a certain sense, at rest. But you cannot deduce that a body which is 'in another', i.e. in a place, must be moving. You can only argue that there is no reason why it should not move. This I believe to be what Plato means to conclude; but the conclusion actually stated is that the One does move; and the proof, on the surface at any rate, seems to be fallacious in form.

145E. Now, if the One is of this character, it must be both (*a*) at rest and (*b*) in motion.

(*a*) It is at rest, since it is in itself. For if it is in one
146. thing, and does not shift out of that thing, it will be in the

146. same (place), namely itself; and that which is always in the same (place) must of course always be at rest.[1]

A physical body is always ' in itself ' in the sense previously defined: all the parts are always in the whole (a whole having been defined as that from which no part is missing, 137C). So it can be said to be always ' in the same ' *ἐν τῷ αὐτῷ*—a phrase which commonly means ' in the same place '. It is only in this sense that the One is proved to be ' at rest '. On the other hand, if this is true, it constitutes no reason why a body, considered as ' in another '—a place distinct from itself—should not also move. No contradiction is involved if we assert that it does move.

146A. (*b*) On the other hand, what is always in another must never be in the same, and therefore never at rest; and not being at rest, it must be in motion.

Therefore the One, being always both in itself and in another, must always be both in motion and at rest.

As we have remarked, all that can really be deduced is that, once it is admitted that a body is distinct from the place it occupies, there is nothing against its constantly leaving that place for another, or at least revolving in it so that its parts are constantly in a different place. (Locomotion is the only sort of motion here considered. In Hyp. I it was easy to prove at the corresponding point that the bare One could not suffer any kind of change, including alteration. But here alteration is reserved for treatment later (155E ff.), after the implications of existence in time have been analysed.)

The proof appears to be formally fallacious. It seems certain that in the previous section ' in another ' meant ' in a place distinct from itself '. But here ' in another ' apparently means ' in a different place from where it was before '. The shift of meaning is so obvious that we cannot suppose Plato unconscious of it. It seems to be due to his plan of casting the whole evolution into the Eleatic form of deduction from premisses already established. Even so it is not clear why he should assert more than that a body in a place *can* move.

It has often been remarked that many obscurities in the *Par-*

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[1] Cf. Anaxagoras' argument, known to us only from Aristotle (*Phys.* 205*b*, 3), and summarised by Ross (*ad loc.*) as follows: ' the infinite is in itself (since there is nothing bigger than it for it to be in); now where a thing is, there it is its nature to be; therefore it is the nature of the infinite to be in itself; therefore it supports itself in its existing position ' (*στηρίζειν αὑτὸ αὑτό φησιν τὸ ἄπειρον*). The last phrase, according to Aristotle, means that it is immovable. Cf. Emped. 27, *οὕτως Ἁρμονίης πυκινῷ κρύφῳ ἐστήρικται Σφαῖρος*, which Eudemus (frag. 7) understood to mean motionlessness.

menides might become clear if we possessed more Eleatic literature. Possibly the fallacious argument is an imitation of Zeno. We have seen that Zeno denied that there could be such a thing as a place distinct from the body occupying it ; and he may have used this as a reason for denying the possibility of motion from one place to another. Thus he might argue : ' Whatever exists is somewhere, and it can only be in itself ; for it cannot be in another, since place does not exist. But if it is always in itself, it is always " in the same " ; and what is always " in the same " is at rest. Therefore motion is impossible.' Something analogous is suggested by his proof that the flying arrow is at rest, being at every moment ' over against what is equal to itself ' (*ἀεὶ κατὰ τὸ ἴσον ἑαυτῷ*, Ar., *Phys.* 239*b*, 5). Plato's fallacy might then be justified as a sort of reversal of Zeno's argument, calling attention to the ambiguity. There are two senses in which a thing may be ' always in another (place) '. If we take the new sense here, which is equivalent to ' never in the same (place) ', then there is no reason why this should not be true of a physical body in space, because we have argued (as against Zeno) that a body can be in a place distinct from itself.

A further possibility is that there is here an esoteric allusion to the Pythagorean use of ' other ' (*ἄλλο*) for the material element because this is ' in flux and always becoming something other ' (*ἀεὶ ἄλλο καὶ ἄλλο γιγνόμενον*).[1] There is also the Platonic identification of motion itself with otherness (*ἑτερότης*) or inequality or not-being or the great-and-small, mentioned by Aristotle and Eudemus.[2] As we shall see presently (p. 155) at least some features of the later Platonic doctrine of the great-and-small undoubtedly appear in the *Parmenides*. It may be added that in the *Timaeus* (52A–C) where the unchanging Form, the perceptible images of it in Space, and Space itself, are distinguished and defined, Space is the ' other ' which provides a situation for all things that come into being. The images are said to be ' *perpetually in motion*, coming to be in a certain place and again vanishing out of it '. They are ' the *ever moving* semblances ' of the Forms, and it is proper to such things that (unlike the Forms) they should be ' *in* something else '.[3] Space is the receptacle of becoming, and all the physical bodies it contains are necessarily in perpetual motion and flux.

The conclusion, at any rate, is valid against the Eleatics, whose style of argument Plato is closely following. Xenophanes had said of his One: ‘It always abides in the same (place), *in no way moving*, nor does it beseem it to shift, now here, now there’ (frag. 26). Parmenides says: ‘The same and abiding in the same, it is set by itself and thus ever abides unmoved; for strong necessity holds it in the bonds of the limit which fences it on every side’ (8, 29). Plato points out that a thing may ‘abide in the same’ and be contained within its own limits, and yet move in place. There was, in fact, no reason why Parmenides’ Sphere should not have had rotation (ἐν τῷ αὐτῷ περιφέρεσθαι κύκλῳ, 138c), though there might be no place outside for it to shift into.

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[1] See above, p. 10.

[2] Ar., *Met.* 1066*a*, 11. Eudemus ap. Simplic., *Phys.* 431, 6.

[3] At *Phaedo* 83B the sensible is called *ἐν ἄλλοις ὂν ἄλλο*, in contrast with the intelligible, which is *αὐτὸ καθ' αὑτό*..

‘Moving’ and ‘at rest’ are called contraries. Critics frequently speak of a pair of arguments, such as the above, proving that the same thing has two contrary attributes, as forming an ‘antinomy’ or contradiction.[1] This is not so. There is no contradiction in saying that a thing which is always self-contained is, or can be, perpetually moving in place; and that is precisely all that is asserted. Plato’s point is that expressions like ‘in itself’, ‘in another’ are ambiguous, and Zeno’s dilemmas took advantage of such ambiguities. Our business is to detect them. We can thus disprove Zeno’s constant assumption that one thing cannot have two contrary characters.

The results of the foregoing sections are as follows. The conception of a ‘One which has being’ immediately implies plurality and number, and our thought, without further aid, could advance to an indefinite plurality of things, each of which will be ‘one entity’. We then found that there was nothing to hinder us from clothing a ‘one entity’ with extension and shape, position in space, rest and motion. Thus we could, without any illogicality, deduce or evolve the notion of a physical body with all these attributes. They are precisely the attributes that Parmenides had either affirmed or denied of his One Being in the first part of his poem; and they had all been ascribed to the entities which the physical philosophers after Parmenides regarded as ultimately real: the elements of Empedocles, Anaxagoras’ seeds, Democritus’ atoms. They will belong equally to the four simple bodies in the *Timaeus*. Thus a ‘one entity’ can possess attributes which Parmenides denounced as illogical or irrational, just as well as those which he himself deduced from the same notion of a ‘One Being’. As against Parmenides, Plato has now restored the whole course of the Pythagorean evolution of a manifold world from the One, through numbers and geometrical magnitudes, to physical body in space, though nothing has yet been said about sensible qualities, like hot and cold. These may come into consideration at a later stage. For the present we pause at the point where Parmenides' goddess put an end to her trustworthy reasoning about the truth.

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[1] Thus Burnet (*Gk. Phil.* I, p. 272), regarding Hyp. I and II as a refutation of Megarians, speaks of the results of Hyp. II thus: ‘If (as the Megarics did) we identify One with being, we shall have to predicate of it all sorts of *incompatible* predicates’ (my italics).

146A–147B. *A One Entity* (*as above qualified*) *is the same as, and different from, itself and the Others*

At this point begins a fresh main division of the argument. In virtue of the attributes successively added in the previous sections, the 'One Entity' we started with has become an extended body in actual space capable of motion and rest. That the coming arguments apply to a 'One' which has those attributes is stated in the opening sentence of this section, and implied by the arguments themselves. In the sections now following (to 151E) no fresh attributes are added. We are to consider various relations in which such a physical body may stand to itself and to others. Three pairs of contraries are now considered, which appeared at the corresponding stage in Hyp. I: Same and Different, Like and Unlike, Equal and Unequal. Aristotle in his *Selection* (or *Division*) *of Contraries* ranked these three pairs in the same order under the primary pair, Unity and Plurality: 'Same, Like, Equal, belong to Unity; Different, Unlike, Unequal, to Plurality' (*Met.* 1054*a*, 29). But between the second and third pairs, Plato inserts another: 'in contact', 'not in contact'. It is not unlikely that this pair, and perhaps all the others, had figured in Zeno's dilemmas.[1]

The proofs in the coming four sections are considerably harder to follow than any we have so far dealt with. But the last two sections have taught us that two apparently contradictory statements can both be true of the One, according as we regard it under one or other of two different aspects. Thus, as all its parts, the One is 'in itself' as whole; as whole, it is not 'in itself' as all its parts. We must, accordingly, be prepared to find that 'the One' (and 'the Others') will have different senses, or be regarded under different aspects, in the several proofs. In fulfilment of his design, Plato leaves it to us to discover the relevant sense or aspect, or else introduces the new sense, not by defining it at the outset, but by explicitly assuming it as the proof proceeds. The method of argument superficially resembles Zeno's, who passed from one sense or aspect of 'the many' to another within the same argument.

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[1] See above, p. 58.

But Plato's purpose is the opposite of Zeno's. He is not reducing his hypothesis to absurdity by alleged contradictions, but indirectly pointing out that conclusions which appear contradictory are really compatible, if the different senses and aspects are distinguished.

We now hear for the first time of 'the Others' in the plural; in Hyp. I there were no Others. This vague expression has caused much confusion, as well it might, since, like 'the One', it has various senses in the different Hypotheses and even in the several arguments within one Hypothesis. Evidently the meaning of 'things other than the One' may be expected to vary with the meaning of 'the One' and with the meaning of 'other'.

As to the nature of the Others in the present Hypothesis, we must seek light from the complementary Hypothesis III, which deduces the consequences that follow for the Others from the same supposition of a 'One that has being', and tells us what these Others are. They are there regarded under the two aspects which we have already distinguished. (1) They are at first defined as a plurality of one-entities, each of which has its being and its unity (just as the One has) and can possess all the contrary characters which Hyp. II ascribes to the One. They are, in fact, simply 'other ones', alongside of 'the One' endowed with the foregoing attributes, and exactly like it. From this standpoint 'the One' merely means *any* one of a set of similar things, as opposed to the other ones making up the set. (2) Secondly, at 158B ff. Hyp. III passes to considering the Others 'before they acquire unity'. This means that we are to abstract the unity they possess and think only of the remaining factor which can *have* that unity. The Others then become mere plurality without any unity, 'unlimited multitudes' (πλήθη, ἄπειρα πλήθει). The factor which remains is the Unlimited. This must receive Limit before you can have one limited thing (πεπερασμένον), alongside of other limited things. 'Their own nature gives them, in themselves, unlimitedness' (ἀπειρίαν, 158D). From this point of view 'the One' means the limiting factor.

This unlimited element was called by Plato and his followers 'the indefinite dyad', 'the great and small', 'the unequal', 'plurality' (without unity), 'that which surpasses and that which is surpassed', and '*the other*' (τὸ ἕτερον or τὸ ἄλλο).[1] Sir W. D. Ross, after reviewing the evidence for these various names, writes with reference to the Platonist manner of generating numbers:

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[1] Ar., π. τἀγαθοῦ, frag. 28R: Plato made the principles of all things, intelligible or sensible, the One and the Indefinite Dyad = τὸ μέγα καὶ μικρόν = τὸ ἄπειρον. An exhaustive review of references to the Indefinite Dyad or the Great and Small is given in Robin's *Théorie platonicienne des Idées et des Nombres*, pp. 635 ff.

> ‘ Aristotle explains aptly in *Phys.* 206*b*, 27, why Plato called the material principle “ great and small ”. “ Plato made the indefinites [τὰ ἄπειρα] two in number for this reason, that the indefinite is thought to exceed and to proceed to infinity both in the direction of increase and in that of diminution ”. This is just the picture of ἀπειρία that we get in the *Philebus.* It is vague quantitativeness, that which ranges from the infinitely great to the infinitely small, and which, to become any definite quantity, must be determined by πέρας or as Aristotle says, by the One. It is not, as Aristotle usually depicts it as being, two things, the great and the small, but, as he occasionally calls it, the great-and-small, one thing with opposite potentialities.’[1]

At *Philebus*, 24, Plato sets out to describe the two elements, the unlimited and the limit, and the combination of both in the limited. He begins by explaining that the unlimited is in a sense a manifold. As an example of an unlimited he takes ‘ hotter and colder ’. In these no limit can be discerned ; there is always a more and a less without any end. The more and the less are always obliterating any definite quantity (τὸ ποσόν) ; if they allowed definite quantity or measure to establish itself, they themselves would disappear from the field they occupy. Hotter and colder would exist no longer, for they are always advancing further, whereas definite quantity stands still and puts an end to any advance. Thus hotter and colder form an unlimited. In general an unlimited can be defined as ‘ anything that appears to us to be becoming more or less and to admit greater or less intensity, excess, and the like ’. Hotter and colder are instances of perceptible qualities. The pair are an ‘ indefinite dyad ’, forming a continuum with no maximum or minimum. Such qualities are further said to ‘ appear to us to be becoming more and less ’. According to the analysis of sensation and sense-perception in the *Theaetetus* what we call a hot thing is not a permanent object with a permanent quality. It is actually a change which has the power (δύναμις) of making us ‘ feel hot ’ or of making another thing we call ‘ cold ’ hotter. The object is always changing, however slightly, ‘ advancing ’ towards hotter or colder, more or less. In the *Philebus* (25A) the second element, the limit, is defined as ‘ what does not admit more and less, etc., but does admit their opposites : first, the equal or equality, next the double and whatever is a number in relation to a number or a measure in relation to a measure '. And again later : ' the equal and the double, and generally all that puts an end to the mutual disagreement of the opposites, and by the introduction of number reduces them to symmetry and concord '. The combination of the two elements is defined as ' a coming-into-being resulting from the measures produced with the help of the limit '. An instance is musical concord, produced by the imposition of a definite ratio upon the unlimited range of higher and lower in sound. To quote Sir W. D. Ross [1] once more : ' By the unlimited (in the *Philebus*) Plato means that which is quantitatively indeterminate, though qualitatively it is determined, e.g. as temperature or sound ; and by limit he means quantitative determination. Heat and cold, or the height and lowness of notes, are apparently not thought of as different degrees of the same thing, but as distinct and opposite qualities, for quantitative determination is described as a ratio (of equality, doubleness, etc.) between heat and cold, or between height and lowness.'

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[1] *Aristotle's Metaphysics* vol. i, p. lx.

In the coming arguments about the relations of the One to the Others, we shall find that Plato, relying on his reader to consult the analysis of the Others in Hyp. III, shifts from one to the other of the above two points of view. In the earlier part of the present section, for example, the terms bear their simpler sense : the One is any one physical body ' with the foregoing attributes ' ; the Others are other physical bodies, alongside of it and with the same attributes. But in the final argument, which completes the proof that the One is the same as the Others, Plato shifts, with explicit warning, to the second view, in which the Others are no longer external to the One, but the unlimited factor in its composition. We shall find the same shift in subsequent sections.

The first two arguments concern only the One : in what sense can it be (*a*) the same as, (*b*) different from, itself ? The object is to show that ' same ' and ' different ' are themselves ambiguous terms. If the ambiguities are duly realised, there is no objection to one thing having both these contrary characters, even in relation to itself.

146A. Further, if the One has the foregoing attributes, it must be (*a*) the same with itself and (*b*) different from itself,
B. and similarly both (*c*) different from, and (*d*) the same with, the Others.

(*a*) Anything is related to anything in one of the following ways : either it is the same or different ; or, if neither

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[1] *Aristotle's Metaphysics*, vol. i, p. 171.

146B. the same nor different, it must stand as part to whole, or as whole to part. Now the One cannot be part of itself, nor can it stand as whole to itself as part. Again the One
C. is not different from one, and so not different from itself.

Therefore, since it is not different and does not stand to itself either as whole to part or as part to whole, it follows that it must be the same with itself.

That any one thing 'with the foregoing attributes' is the same as itself hardly needs proof. The chief point of this argument is the definition of 'same': *x* is the same as *y* when *x* and *y* are not two different things or related as whole and part. The definition is put in this form for the sake of the final proof that the One is the same as the Others. It has been objected[1] that Plato ignores the third alternative, that two things should be partly alike or have something in common. But likeness is separately considered in the next section. Also, if we take two things having just the attributes we have enumerated and no others (for instance, shape, but no specified shape, and so on), the only alternatives are Plato's two: that they should be two exactly similar things side by side, or that one should be a part of the other. Obviously neither can be true of any one thing. So 'the One' cannot differ from itself in either way.

146C. (*b*) Again, if a thing is in a place the same with itself and also in a place other than that self, it must be different from itself; otherwise it could not be in a different place. But we saw that this was true of the One: it was at once in itself and in another.

In this respect, therefore, the One must be different
D. from itself.

This conclusion is deduced from the proof that a body is both self-contained and in a place distinct from itself. It was self-contained in that, considered as 'all its parts', it is in itself as whole. Considered as a whole, it was 'in another'. The conclusion means that it is 'different from itself' in so far as it has two distinguishable aspects as 'whole' and as 'all the parts', and contrary statements can be made about it according as we take one aspect or the other; for itself as all the parts is in itself as the whole, but itself as whole is not in itself as all the parts, but in a place distinct from itself. This is a valid sense of 'different from itself'; it should not be dismissed as sophistic.

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[1] Speiser, p. 32.

We now turn to the relations of one thing to other things, similar to it and existing alongside of it. The next paragraph amounts to a definition of numerical difference. As Plato remarks elsewhere (164B) the word ' other ' in one of its uses is simply synonymous with ' different ' (ἕτερον), as when we say that this is *one* thing (ἕτερον) which is different from, or is not, *another* thing (ἕτερον). The One and the Others are a collection of similar things, any one of which can be singled out and called ' the One ', while the rest are the other ones or ' the not-Ones ' (τὰ μὴ ἕν). For these phrases we might substitute ' *A* ' and ' the not-*A*'s '. If the not-Ones are different from the One—and ' not-Ones ' here simply *means* that—then the One must be different from them in the same way, viz. numerically.

146D. (*c*) Again, if something is different from something else, that something else must be different. Now, all the things which are ' not One ' must be different from the One, and the One also must be different from them.

Therefore, the One is different from the Others.

The difference here defined is, as we have remarked, numerical difference, or at least primarily that, though the argument would apply equally to conceptual difference. It is interesting as anticipating the demonstration in the *Sophist* (255E ff.) that ' is not ' can mean merely ' is different from '. When the Others are described as ' not One ' (μὴ ἕν) this is to mean here, not that they have no unity, but simply that they are numerically different from any one thing with which we contrast them as other things. And it is emphasised that, in just the same way, the One *is not* the Others.

The rest of the argument is more complicated. It remains to find a sense in which the One is the same as the Others. The following proof is based on the axiom already laid down, that any two things must either be the same, or be different, or be related as whole and part. It is argued that the One and the Others (1) are not different, and (2) are not related as whole and part ; therefore they must be the same. The two parts of the argument are independent of one another.

(1) The first part can be understood as defining conceptual identity and difference. One thing and other things that differ from it only numerically will be conceptually the same.

146D. (*d*) Now consider : Sameness itself and Difference are contrary to one another. So Sameness will never be in what is different, nor Difference in what is the same. And

146D. if Difference will never be in what is the same, there is
nothing that is, in which Difference is present for any length
E. of time ; for if it were in something for any length of time
whatsoever, during that time Difference would be in what
is the same. And since it is never in what is the same,
Difference can never be in anything that is ; and consequently
neither in the ' not-Ones ' nor in the One. Therefore
it is not Difference that could make the One different
from the ' not-Ones ', or the ' not-Ones ' different from the
One. Nor yet will they be different from one another by
147. virtue of being themselves,[1] if they do not possess Difference.

Therefore, if neither their own character nor Difference can make them different, every possibility of their being different escapes us.

This argument is commonly regarded as a sophism, turning on the vague and ambiguous statement that ' Sameness itself (αὐτὸ ταὐτόν) will never be in what is different (ἐν τῷ ἑτέρῳ), nor Difference (τὸ ἕτερον) in what is the same (ἐν ταὐτῷ).' If it is a mere sophism, it is singularly unconvincing, just after the valid demonstration that the One (any one thing) must be numerically different from the not-Ones (all the other things). It would be much simpler to argue that the One (one thing) is in a sense the same as the Others, because each of the Others must equally be one thing ; the One and the Others are, in fact, conceptually the same, though numerically different.

I suggest that this is what Plato in fact means, though it is obscurely put, because the argument, as usual, is cast into deductive form, the assumptions appearing only as steps in the reasoning. The distinction between numerical and conceptual (formal, specific, εἴδει) sameness or difference is frequently stated by Aristotle as familiar.[2] This distinction, like many others, was probably first formulated in those discussions at the Academy in which Aristotle had taken part as Plato's pupil and colleague and which the

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[1] i.e. in virtue of being ' the One ' and ' the Others ' respectively ; i.e. their *numerical* difference will not make them different in the sense now being considered. Cf. 149E, the One and the Others will not be greater or less than each other ' merely in virtue of being what they are (αὐταῖς ταῖς οὐσίαις)—the One being One and the Others being other than the One '.

[2] e.g. *Met.* 1054*a*, 32 : ' " The same " has several meanings : (1) we sometimes mean " the same numerically " ; sometimes (2) what is one both in definition and in number, e.g. you are one with yourself both in species (εἴδει) and in matter ; sometimes (3) when the definition of the primary essence is one ; e.g. equal straight lines are the same.'

Parmenides itself must have done much to provoke and encourage. We might well expect to find it indicated precisely at this point.

The last paragraph left us with the clear picture of any number of things, each of which is one thing, though it can be negatively described as *not* any other one. We shall further learn from Hyp. III that each of these ' one-things ' will have all the attributes earlier ascribed to ' the One ', and no other attributes. They will accordingly differ *only* numerically, like the units of number or, to borrow Aristotle's illustration, equal straight lines. According to modern convention we could denote this set of things by $a_1, a_2, a_3 \ldots a_n$. ' The One ' stands for any one of this set ; ' the Others ' for all the rest, ' the not-Ones ' (τὰ μὴ ἕν). Also it has been argued that any one thing is the same with itself, and this is true both numerically and conceptually : any one thing is one *and the same* thing. The difference defined in the last paragraph was an *external* difference, *between* one thing and another. Plato now speaks of an *internal* difference, a difference which is ' *in* ' things. Let us suppose that this means a difference of ' form ' or character, a conceptual difference. ' Difference ', he says, ' will never be in what is the same.' Each member of our set is one and the same ; it has its numerical unity and its character, a. If any internal difference made its appearance, so long as that difference existed we should no longer be speaking of the same set of things that we started with ; one or more of the a's would have become b. So long as each member remains one and the same, no internal difference can appear in the One or in the Others. So it is not internal or conceptual difference that could make the One different from the Others. And they will not differ ' by virtue of being themselves ', i.e. by the mere fact that we call one of them ' the One ' and the rest ' the Others ' or ' the not-Ones '. So there will be no conceptual difference at all. On this showing the whole argument amounts to a definition of conceptual identity.

(2) Since this first part of the argument has found a sense in which the One is not different from the Others, it has really established a sense in which they are the same, though their numerical difference remains. But at the outset it was laid down that there was a third alternative : the One and the Others might be neither the same nor different but related as whole and parts. We are now offered a ' proof ' that they cannot be so related ; and so we shall arrive at the formal conclusion that they must be absolutely ' the same '. In the course of the argument fresh assumptions are introduced, which obviously contradict those on which we have so far proceeded.

147A. (2) Further, things which are 'not one' do not possess unity either [1]: if they did, they would not be 'not one', but in a sense one. So things which are 'not one' cannot be a number; if they had number, once more they would not be 'not one' in every sense.[2] Again, the things which are 'not one', cannot be parts of the One, because once more they would then possess unity.[3] Consequently, if the One is one in every sense, and the things that are 'not B. one' are not one in every sense, the One cannot stand to the things that are 'not one' either as whole to parts or as part to whole; nor again can the things which are 'not one' be parts of the One or wholes of which the One is part. But we said that things which do not stand to one another either as parts or as wholes, and are not different from one another, must be the same with one another. Therefore, we must say that, since the One stands in this way to the things that are 'not one', it is the same as they.

It appears, then, that the One is different both from the Others and from itself, and also the same both with them and with itself.

ARISTOTELES. 'The argument certainly seems to lead to that conclusion'.[4]

This second part of the argument states, in an indirect manner, the assumptions from which it will follow that even the numerical difference hitherto recognised between any one thing and other 'one-things' will be obliterated. So far we have had the picture of a set of any number of 'one things', conceptually indistinguishable but numerically different. That set can be regarded as a whole or total, of which the 'one things' are parts. If we now shift to that point of view, 'the One' may mean the one whole, and the 'things other than the One', the parts. Or the Others may be the total, of which the One is a part. The condition on which this relation of whole to parts depends is that whole and parts shall be each one thing and so possess unity. This was laid down at the outset of the present Hypothesis (142E). But here this condition is explicitly denied: 'things which are not one' is no longer to mean ‘ other ones ’, but things which do not possess unity in any sense and cannot therefore make up a number of one-things. And ‘ the One ’ is to be ‘ one in every sense ’, and so not a whole or total, of which the Others could be the many parts. If we take ‘ One ’ and ‘ not one ’ in this absolute sense, then numerical difference itself vanishes, and we reach the formal conclusion that there can be no difference of any kind between One and Others. The One will be ‘ the same as the Others ’ in the sense that we have abolished the possibility of every kind of difference, numerical or conceptual.

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[1] i.e. any more than they possess (internal) difference.

[2] Hence the 'not-Ones' cannot be a whole (number) of which the One might be a part.

[3] Since each of many parts must be *one* part, 142E.

[4] *κινδυνεύει φαίνεσθαι ἔκ γε τοῦ λόγου*: a polite acceptance of the result, with a suggestion of doubt, which may be meant to warn us against accepting the last part of the argument without reflection. Cf. *Phaedo*, 107A, *οὐδ' αὐτὸς ἔχω ἔτι ὅπῃ ἀπιστῶ ἔκ γε τῶν λεγομένων.*

Once more the deductive form of argument proves to be misleading. You can *prove* that one thing and other things are not whole and parts only by defining ‘ One ’ and ‘ Others ’ in such a way that they cannot be so related. These definitions are, in fact, given in the course of the argument. The One is *assumed* to be ‘ one in every sense ’, and so not a whole made up of many parts ; and the Others are stated to be ‘ not one ’ or ‘ other than one ’ in the sense of having no unity at all. The whole argument amounts to no more than saying that, if ‘ One ’ and ‘ Others ’ are so defined, then they cannot be whole and parts.

Another interpretation, however, is possible, if we suppose that Plato is here shifting to the alternative view of the Others taken in Hyp. III, according to which the Others are not ‘ other ones ’, but that element of indefinite multitude without unity to which Limit must be added before there can be one definite thing. We might take the assumption in our passage that ‘ things that are “ not-one ” do not possess unity ’ as meaning those ‘ Others before they come to possess unity ’ (158BC). It will then be true that these ‘ not-ones ’ are ‘ not one ’ in every sense ; they are indefinite multitude without any unity.[1] Also we might take the second assumption that ‘ the One is one in every sense ’ as meaning that Unity remains entirely apart from the unlimited element or Others, and does not communicate oneness to them.[2] The One and the Others, so abstracted from one another, cannot be a whole of many parts, each of which is one. In this way, once more, numerical difference would disappear.

Presumably Plato’s purpose is to puzzle the reader by apparent contradictions and set him thinking out the difference between the various senses of ‘ not one ’. There may also be a polemical refer-

[1] Ar., *Met.* 1001*b*, 19, speaks of the Platonic view that number and magnitude are composed ἐκ τοῦ ἑνὸς αὐτοῦ καὶ ἄλλου μὴ ἑνός τινος, and equates this τὸ μὴ ἕν with Inequality (a synonym of the Unlimited or Indefinite Dyad).

[2] This is the supposition made in Hyp. IV, where the same consequence is deduced, that there will then be no ‘ other ones ’.

ence to the Eleatic neglect of this distinction, as if Plato were saying: If you insist that what is one (or not one) must be one (or not one) in every sense, then you will find yourself contradicting obvious truths. On this view the argument resembles the final argument in the section below on contact (149A–D). There also Plato suddenly substitutes for his previous assumptions the Eleatic dogma that the ' One ' is unique (there are no other ones beside it) and without distinction of parts (there are no other ones inside it), and points out that, in that case, there is no such thing as contact.

We may claim that this curious section supports the view that Plato is not merely indulging in a parade of sophistical arguments. If that were all, he would hardly have been at the pains to construct so intricate a piece of reasoning. He might, for instance, have said simply: The One is the same as the Others; for the One is the whole of which the Others are all the parts, and the whole is the same as all its parts. As the section stands, it becomes significant when regarded as directing attention to the ambiguities of ' same ' and ' different ', as well as to those of ' one ' and ' not one '.

147C–148D. *A One Entity (as above qualified) is like and unlike itself and the Others*

This pair of contraries is certainly taken from Zeno's dilemmas; but ' likeness ' receives a more precise sense. The definition already given at 140A is here repeated with more detail. Two things are alike when they are *ταὐτὸν πεπονθότα*, i.e. when both have at least one character in common, or the same statement can be truly made about both—including the statement that they are different. ' Likeness' has thus a wider sense than likeness in *quality*. The opening sentence of the argument states that One and Others are once more to be regarded as numerically different things, as at 146D, 1–5.

147C. Is the One also both like and unlike itself and the Others?

(*a*) Since, as we have seen, the One is different from the Others, the Others also of course must be different from it. And it differs from them neither more nor less than they differ from it, but just *as* they do; and if neither more nor less, then in a like manner. Accordingly, in so far as it has the character of ' being different ' from the Others, and the Others in just the same way have the character of ' being different ' from it, in so far the One and the Others will have the same character.

D. What I mean is this: when you use any word, you use it to stand for something. You can use it once or many times,

147D. but in either case you are speaking of the thing whose
name it is: however many times you utter the same word,
you must always mean the same thing. Now 'different'
E is a word that stands for something; so when you utter
it, whether once or many times, you are using it to stand
for, or naming, just that thing whose name it is. Hence
when we say 'the Others are different from the One' and
'the One is different from the Others', we use the word
'different' twice, but nevertheless we always use it to
stand for just that character whose name it is.[1] Conse-
quently in so far as the One is different from the Others
148. and the Others are different from the One, just in respect
of having the character 'different' the One and the Others
have precisely the same character; and to have the same
character is to be alike.

Thus, in so far as the One has the character of being different from the Others, just in that respect it and they must be entirely[2] alike, because they are entirely different.

The argument is sound.[3] Two things are 'alike' if the same statement can be truly made about both. This holds good even in the paradoxical instance of the statement that either is different from the other. The One and the Others are all alike in being numerically different from one another.

The next argument, proving that the One is *unlike* the Others, is questionable.

148A. (*b*) On the other hand, 'like' and 'unlike' are contraries;
and so also are 'different' and 'same'. Now we have also
seen that the One is the same as the Others. And 'being
B. the same as the Others' is the contrary character to 'being
different from the Others'. And it has been shown that,
in so far as the One is different, it is like them. Consequently,
in so far as it is the same, it will be unlike them, in respect
of the character contrary to that which made it like them,
namely difference. Sameness, then, will make it unlike;
otherwise sameness will not be the contrary of difference.
C. Therefore the One will be like and unlike the Others—
like in so far as different, unlike in so far as the same.

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[1] This is perhaps the clearest statement in Plato that every word must have a definite meaning, which is a constant character or 'nature' (φύσις), for which the word is the 'name'.

[2] ἅπαν ἅπασιν can be taken as equivalent to the common παντά-πασιν, ἅπαν being singular to suit ἕν.

[3] It is rightly defended by Speiser, p. 35.

148c. Aristoteles. 'Yes, it seems possible to argue the case in that way.'

This argument appears to be a puzzle set in order that we may detect the fallacies. There are two. (1) If we were right in understanding that the One was numerically different from, but conceptually the same with, the Others, then numerical difference and conceptual sameness are not 'contraries'; and they are not contradictory or incompatible. (2) Since likeness means having an identical character, and two things are alike if they both have the character 'different' (as has just been proved), they are also alike, not unlike, if they both have the character 'same'.[1] The concluding remark, 'It seems possible to argue the case in that way' may contain a note of warning. At any rate Plato adds a second argument, which is capable of a valid interpretation.

148c. Yes, and it can also be argued as follows. We may say that in so far as the One has the character of being 'the same' (as the Others),[2] it has not a diverse character, and so is not unlike, and so is like. And in so far as it has the character of being 'other' (than the Others) it has a diverse character, and so is unlike.

Therefore, because the One is the same as the Others and because it is different, on both grounds together or on

D. either singly it will be both like and unlike the Others.

This alternative reasoning does prove that the One is both like and unlike the Others. For we have seen that the One and the Others are both conceptually the same and numerically different. In so far as both One and Others have the same character (whether it be conceptual sameness or numerical difference), they are alike. But in so far as it is true of any One that it is numerically other than the Others (*ἄλλο πέπονθεν*), some statement will be true of it that will not be true of any of them; for instance that it is *this* one and not that one, or that it is *here* and not there. Therefore every 'One' will, in that respect, be unlike every 'Other'.

Finally, it is stated that similar arguments will show that the One is both like and unlike itself.

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[1] This is actually stated just below in the alternative argument, c 4.

[2] *ταὐτὸν πεπονθός* must be understood in this sense: 'it is true of it that it is the same (as the Others),' or 'it has the character of sameness'. Cf. the full phrase *ἕτερον πέπονθεν εἶναι* at 140A, 148A. If we translate 'it has the same character' (that the Others have), this is actually the definition of 'being alike', and we cannot *infer* that is alike.

148D. Similarly, in relation to itself: since, as we have seen, it is both different from itself and the same with itself, on both grounds together and on either singly it will be both (*c*) like itself and (*d*) unlike itself.

The conclusion that the One is like itself will not be disputed. That it is also unlike itself can be deduced from the earlier proof that it is different from itself in the sense of having different aspects, according as we consider it as a whole containing all its parts or as all the parts contained in the whole (146C).

148D–149D. *A One Entity* (*as above qualified*), *has, and has not, contact with itself and with the Others*

The only earlier mention of contact was in Hyp. I at 138A, where it was pointed out that a bare One which was without parts and shapeless could not have contact at several points with something else all round it. But now we are considering a One which has acquired shape and position in space, and is, in fact, a physical body. So the question is open: in what ways can a physical body be said to have contact with itself or other bodies?

It is not unlikely that the pair of contraries, ' in contact ', ' not in contact ', figured in Zeno's dilemmas, where the question of the Pythagorean unit-points touching one another would naturally arise. There may actually be a reference to some Zenonian argument in Aristotle's *Physics*, *227a, 27*: ' If there are, as some say, separately existing points and units, the same thing cannot be both point and unit; for points have contact, units have succession; and points can have something between them (for every line is between points), whereas units need not; for there is nothing between the numbers 1 and 2.' These points which can have contact can only be the Pythagorean points conceived as very small bodies. Zeno might argue: If things are many, (1) they must be in contact, for the successive points in the row forming a line must touch one another. But (2) no two given points can touch one another, because between any two points there is always a line consisting of more points. The Pythagorean conception is again attacked at *Phys.* 231*a*, 21, where Aristotle proves that a continuum cannot be composed of indivisible points in a row.

148D. Again, there is the question of the One having, or not having, contact with itself and with the Others.

We have seen that the One is in itself as a whole. It is also in the Others. Accordingly, (*a*) as being in the
E. Others, it will have contact with the Others; and (*b*) as

148E. being in itself, while it will be precluded from contact with the Others, it will have contact with itself.

In this way, then, the One will have contact both with itself and with the Others.

The arguments here are based partly on the earlier paragraph on position in space (145B ff.), where it was said that the One, considered as all its parts, is in itself as whole, but as whole is ‘ in another ’ (ἐν ἄλλῳ), namely in space. Now for ‘ in another ’ is substituted ‘ in the Others ’ (ἐν τοῖς ἄλλοις). The substitution is justifiable. In the former passage we were considering only one physical body by itself; but since then the Others have been introduced and we are now considering the possible relations of one body to other bodies. ‘ In the Others ’ will mean ‘ among the others ’. The first conclusion is that, if you have one body among other bodies, there is no reason against its being in contact with them. This point is probably made against the Eleatics, who held that the One Being must be unique and ‘ one and continuous ’ (ἓν συνεχές, Parm. 8, 6 and 22–25), so that there was no plurality of bodies, either outside or inside the One, which could be in contact either with the One or with one another. There was no one body among others.

On the other hand, when we spoke of the One as ‘ in itself ’, we were thinking of the One as the whole in which all the Others were contained as parts. There is now no question of contact with Others outside, for all the Others are inside. But we might say that the parts have ‘ contact ’ with the whole in the loose sense that they come up to the boundary of the whole and, as it were, touch it, leaving no interval between it and themselves. There may be a reference to the use of the term in geometry, as in Euclid, iii, Def. 2: ‘ A straight line is said to *touch* (ἐφάπτεσθαι) a circle which, *meeting* (ἁπτομένη) the circle and being produced, does not cut the circle.’ Thus Parmenides said of his Sphere that ‘ being equal every way, it *meets* (comes up to) the limits uniformly ’ (ὁμῶς ἐν πείρασι κύρει, 8, 59). It is only in the next paragraphs that ‘ contact ’ is defined in a stricter and more normal sense, which will admit of contact between one body and others among which it is, but not of contact between one body and itself, i.e. its own parts, as just described.

148E. From another point of view, if anything is to touch something it must be situated next to that thing, occupying the position adjacent to the position of the thing it touches.[1]

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[1] The meaning here is certain, though the text may be corrected in various ways. Aristotle's definitions of ‘ next ’ and ‘ contact ’ in *Phys.* V, iii, may be compared.

148E. (*c*) Accordingly, if the One is to touch itself, it must be
situated next to itself, occupying the place adjacent to the
place in which itself is. If the One were two, it might do
149. this and be in two places at once ; but not so long as it
remains one.

Therefore the same necessity which forbids the One to be two forbids it to touch itself.

For contact in the normal sense two bodies are required, external to one another and adjacent. In this sense, of course, the parts of one body cannot have contact with the body itself as whole.

Lastly, there is the case of one body assumed to be the only one body in existence—an assumption explicitly stated in the course of the argument (149C 4). This is the case of the Eleatic One Being, which is without internal distinction of parts and is unique—two attributes which Parmenides had included in his assertion of unity. If that is so, then there is no plurality ; there are no Others, either as distinct parts of the One or as other ones outside it. Hence we can no longer say that the one body has any contact with anything. Yet Parmenides had allowed himself to say that being ' is all continuous ; for being is *near to* (neighbours) being ' (*ἐὸν γὰϱ ἐόντι πελάζει*, 8, 25), as if two adjacent ' beings ' or parts of the One Being were involved.

149A. (*d*) On the other hand, the One will not touch the Others
either. For this reason : we are asserting that, in order to
have contact, a thing must be distinct from, but next to,
the thing it is to touch, and there must be no third thing
between them. So, if there is to be contact, there must be
at least two things. And if to the two terms [1] a third be
B. added next to them, the number of terms will be three, the
number of contacts two. And so the addition of every
fresh term will mean the addition of one fresh contact,
with the result that the contacts are always fewer by one
than the amount of the numbers. For every subsequent
total of terms exceeds the total of contacts by the same
amount as the original pair of terms exceeded the contacts,

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[1] ' Term ' seems to recall the original sense of ὅρος. See above, p. 8. Cf. Ar., *Met.* 1092*b*, 8 (asking how numbers are to be the causes of substances and of their existence), πότερον ὡς ὅροι, οἷον αἱ στιγμαὶ τῶν μεγεθῶν ; followed by a reference to the representation of numbers in triangular or square patterns. The ' points ' meant seem to be the Pythagorean point-atoms of which bodies were to be built. This concrete sense of ὅρος is specially relevant to our context, where the units or terms are to be imagined as in physical contact.

149C. since at every step one term and one contact are added. Thus, however many things there are, their contacts are always fewer by one. And if there is only a One, not a pair of things, there will be no contact.[1]

Now things that are other than one, we say, are not one and have not unity, since they are other. Consequently they do not possess number, because there is no one among D. them. Thus they are neither one nor two nor any other number you could name. The One, then, is the only thing that is one, and there will be no pair, and consequently no contact. Therefore, contact being non-existent, the One does not touch the Others, nor the Others the One.

Thus the total result of these considerations is that the One both touches, and does not touch, both itself and the Others.

This argument affords another clear case of an assumption, which is really a definition, being repeated from an earlier argument, although it contradicts the assumptions of the immediately preceding arguments. Plato began here by showing that, if one body is 'among the Others', it can have contact with them. The Others there were other *ones*. But here he suddenly asserts that 'things that are other than one, *we say*,[2] are not one and have not unity, since they are other'. So the One is to be the only thing that is one; there are no other ones. If this assumption were stated at the beginning of the present argument *as* an assumption, all appearance of contradictory conclusions would vanish. This case is parallel to the one we have already noted at 147A (the passage referred to), where the same Eleatic dogma that there are no 'other ones', no plurality, but only a unique and indivisible 'One', was suddenly introduced in order to reach the conclusion that there could be no such thing as difference of one thing from another. Here, moreover, as there, it is possible that the Others are to be conceived as the element of indefinite multitude which has no unity at all (Hyp. IV). The same conclusion would then follow. This element corresponds to the continuous 'being' which fills the Parmenidean Sphere. It can 'come up to' its boundary, but not have contact in the sense here defined.

The whole section amounts to an analysis of the notion of contact between bodies, and the assertion that there is nothing irrational about it. If you accept Parmenides' dogma that a One Being must be one both in the sense of unique and in the sense of having no distinct parts, then no contact in the usual sense is possible. But we are considering a One Being which is one whole of distinct parts, and each of those parts is a one-being among other one-beings. Then, even if we take the whole universe, which is unique but not indivisible, the parts may be loosely said to ' touch ' the boundary of the whole. And if we take the parts, which are not unique, there is nothing irrational in the supposition of a number of bodies having contact with one another in the strict and normal sense. This tallies with the conclusion drawn by the Atomists, who allowed that their ultimate reals had no internal separation of parts, but saw that there was nothing against a plurality of such things, external to one another and capable of being in contact. In his curiously indirect way Plato points out that the only objection lies in the false Eleatic dogma of a One which is both unique and indivisible.

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[1] As Diès observes (p. 33), Aristotle reproduces this reasoning at *Anal. Pr.* 42*b*, 1–26, in discussing the numbers of terms, premisses, and conclusions in a series of syllogisms.

[2] The reference can only be to 147A.

149D–151B. *A One Entity (as continuous quantity or magnitude) is equal and unequal both to itself and to the Others*

The terms equal, greater, smaller, apply to quantities. The first point to be noted is that discrete quantity or number will be separately treated in the section subsequent to the present one. Here we are concerned with continuous quantity (μέγεθος, as contrasted with πλῆθος at 151D, 7). This would include geometrical magnitude and perhaps also quantities of qualities like hot and cold, considered as opposites forming an indefinite continuum. Physical bodies are in question just in so far as they possess these properties.

The present section is, perhaps, the hardest in the whole dialogue, and the interpretations here offered must be taken as specially doubtful. By this time we shall be prepared to find that the One and the Others may have different meanings in the several arguments. In the first, however, the terms seem to be used in their most natural sense : ' the One ' for any one limited magnitude, ' the Others ' for all other limited magnitudes. This is implied by the opening sentences, which define them as the sort of things that can have greatness, smallness, and equality.

149D. We may next enquire whether the One is both equal and unequal, alike to itself and to the Others.

If the One is to be greater or less than the Others or
E. they are to be greater or less than it, neither will be greater
or less than the other merely in virtue of being what they

> 149E. are—the One being One, and the Others being other than the One; but if, besides each being such as it is, they should each possess equality, then they would be equal to one another; or if the Others possess greatness, the One smallness, or the One possesses greatness, the Others smallness, then whichever [1] possesses greatness will be greater, whichever possesses smallness, less.

These sentences, in the first place, define the One and the Others for the purpose of this first argument. They are nothing more nor less than magnitudes, since only magnitudes can be greater than, and less than, and equal to, other magnitudes. The One then will be any one magnitude, the Others all other magnitudes. The distinction between ' One ' and ' Others ', as such, is of no importance: any one magnitude is as much a magnitude as any other. So that distinction has no bearing on these additional characters, the greatness or smallness or equalness that they may *have*. The question remains: what is implied by ' *having* ' these properties?

(*a*) The argument which now follows leads to the conclusion that ' the One is equal to the Others '. If the One and the Others are simply different magnitudes, this is a patent absurdity: ' any one magnitude is equal to every other magnitude ' or ' to all other magnitudes '. We have already learnt, however, from other cases where we were confronted with a manifestly false conclusion, to look for some explicit premiss which entails that conclusion and to infer that the premiss is to be rejected. In the present case we should observe that the conclusion, ' any one magnitude is equal to any other ' or ' to all others ', is simply inferred from the previous statement that one magnitude cannot be either greater or less than others. This is itself absurd, and it depends on what is assumed to be implied in a magnitude being greater or less. We are told that it is to mean that the magnitude *has* greatness or smallness *in* it. This is argued to be an impossibility; with the consequence that no magnitude can be greater or smaller than another. Now the assumption that a thing's being great means that it has greatness in it, is the doctrine of the *Phaedo*, where these very examples, Greatness and Smallness, were used. This doctrine, already attacked by Parmenides in the first part of our dialogue, is the false premiss which entails the absurd conclusion. We should conclude that, so far at least as Greatness and Smallness are concerned, the *Phaedo* doctrine is untenable.

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[1] *ὁποτέρῳ τῷ εἴδει.* As Taylor remarks here, εἶδος is ' used, as often in Plato, colourlessly, with little more meaning than a "something or other".' He renders it by *entity*.

In the *Phaedo* we were told that when Simmias is taller than Socrates that means (1) that there are two Forms, Greatness (Tallness) and Smallness (Shortness); (2) that Simmias has in him an instance of greatness as compared with the instance of smallness in Socrates; and he may also have an instance of smallness as compared with the instance of greatness in Phaedo. Thus Simmias possesses two contrary immanent characters. The gist of the present argument as a whole will be this. The *Phaedo* theory maintained the existence of two Forms, Greatness and Smallness, and declared that the 'reason' why a magnitude is great is that it has in it an instance of greatness (*τὸ ἐν ἡμῖν μέγεθος*). At the same time, as compared with a still greater magnitude, it will also have in it an instance of smallness. If that is what is meant by 'being great' or 'having greatness', it leads to absurdity: there cannot be a greatness or a smallness residing as a quality *in* a magnitude. On this theory, then, no magnitude can be either great or small. So no magnitude can be greater or smaller than another. Therefore all magnitudes must be equal. This is absurd. Therefore the *Phaedo* theory must be rejected.

The argument, accordingly, opens with a brief statement of the false premiss, and a demonstration of its absurdity, which is evidently meant to recall Parmenides' earlier attack on participation.

149E. This pair of characters,[1] then, Greatness and Smallness, must exist; for surely, if they did not exist, they could
150. not be contrary to one another and come to be in things.

That 'Socrates'' theory of Forms and immanent characters is intended here, seems plain from the following context, which echoes Parmenides' objections to participation; indeed the Forms Greatness itself (*αὐτὸ μέγεθος*) and Smallness itself (*αὐτὴ σμικρότης*) are actually mentioned. We have just been told that if one thing is to be greater or smaller than another or equal to it, it must *have* greatness or smallness or equality. 'Having' (*ἔχειν, προσεῖναι*) is now defined in terms of the theory of Forms as meaning that the character is present *in* it (*ἐγγίγνεσθαι*). Earlier (131D) Parmenides has pointed out the absurdity of supposing that either the whole or a 'part' of the Forms Greatness, Equality, Smallness, can be present in a concrete thing. We are now taking, not concrete things, but a set of magnitudes, defined simply as magnitudes, and considering whether a particular instance of greatness or of smallness can be present in any one of them.

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[1] εἴδη can mean either the separate Forms or the immanent characters, or both. Since they 'come to be *in* things', 'characters' is the more suitable translation.

150A. If, then, smallness comes to be in the One, it must be either (*a*) in the One as a whole or (*b*) in a part of it. (*a*) Suppose it comes to be in the One as a whole. Then it must either stretch throughout the whole extent of the One or contain the One. If it is coextensive with the One, the smallness will be equal to the One; if containing it, greater. But smallness cannot be equal to, or greater than, anything and so discharge, not its own function, but that B. of greatness or equality. Therefore, smallness cannot be in the One as a whole. (*b*) Hence, if it is in the One at all, it must be in a part. But not in all that part; otherwise the effect would be the same as in the case of the whole: it would be either equal to, or larger than, any part in which it might be. Therefore smallness will never be in anything, if it cannot come to be in either a part or the whole; and there will be nothing small except Smallness itself.

It follows that greatness will not be in the One either; for then there would be something else, besides Greatness C. itself, that would be 'greater', namely the thing in which greatness was; and that in spite of the thing's having no smallness, which is required for greatness to surpass, if it is to be great; and there can be no such smallness, since smallness is not in anything anywhere.

Further, the only thing than which Greatness itself is greater is Smallness itself; and the only thing than which Smallness is smaller is Greatness itself. Hence, the Others, not possessing greatness or smallness, are not greater or D. smaller than the One; also this pair themselves (Greatness and Smallness) possess their power of exceeding or being exceeded only with reference to each other, not with reference to the One[1]; and the One in its turn, not possessing either greatness or smallness, cannot be greater or smaller than they or than the Others.

It follows that the One, if it is neither greater nor smaller than the Others, cannot either exceed them or be exceeded by them; and that which neither exceeds nor is exceeded must be of equal extent, and so equal.

It is, I think, clear that this very elaborate argument is not a mere sophism; any eristic, by playing on words, could easily invent a much shorter proof that all magnitudes are equal. The reminiscences of Parmenides' attack on participation must indicate that Plato has a serious purpose. If it is right to see here a recantation of the *Phaedo* theory, in so far as these terms are concerned, the results here stated mark an important change in Plato's views. The *Phaedo* (102B, C) spoke of Socrates' shortness as if it were an inherent property which Socrates carried about with him and could 'present' for comparison with the tallness of Phaedo.[1] The objections to this view become much more apparent when we take, not concrete things like tall and short men, but simply a set of limited magnitudes which differ *only* as greater or smaller, say, two finite lines:

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[1] This statement, that the two Forms are correlative to one another and not to individual things, recalls Parmenides' last argument against separate Forms for relative terms (133C ff.). It also conflicts with his earlier argument, the Third Man (131E ff.), which assumed that greatness itself *has* greatness or is a great thing in the same way as individual great things, and so requires another Form to partake of.

A———B
C——D

CD is shorter than AB; it is nothing more nor less than 'a smaller length'. If we take this to mean that CD has present in it 'a smallness', this smallness can only reside in the interval of length between the limiting points C and D. Parmenides argues that it is equally absurd to suppose that it is in the whole of that length or in any part of it. A further objection is that, if it were in the line CD as an inherent property, then CD would be *absolutely* small. But there is no such thing as an absolutely small or absolutely great magnitude. This point seems to be made in the statement that 'smallness will never be *in* anything; there will be nothing (absolutely) small except Smallness itself'. Absolute Smallness and absolute Greatness are opposed to one another; they are the two Forms whose existence was asserted at the outset. But there cannot be (as the *Phaedo* supposed) an instance of either present in any particular magnitude, since every magnitude is infinitely divisible and also might be greater than it is; it cannot be absolutely small or great. Consequently, if to '*have*' greatness or smallness means (as in the *Phaedo*) to contain an instance of absolute Greatness or Smallness, no magnitude can be either great or small. So all magnitudes must be equal. Since this is manifestly absurd, the *Phaedo* theory must be false.

(*b*) The next conclusion: 'the One is equal to itself', must of course be true of any magnitude. So it is quickly disposed of.

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[1] As I have remarked elsewhere (*Plato's Theory of Knowledge*, 44), tallness (μέγεθος) is coupled in the *Phaedo* (65D) with health and strength, and regarded as a physical excellence, like beauty; it is not simply 'largeness'. This helps to disguise its relative character. It is treated as an inherent quality. It is easy to think of a man possessing a size or stature, which alters internally as he grows.

150E. Moreover, the One will also stand in this relation to itself. If it has in itself neither largeness nor smallness, it cannot either exceed or be exceeded by itself, but must be coextensive and so equal to itself.

Therefore the One will be equal both to itself and to the Others.

(*c*) The next argument is to establish a sense in which one magnitude can be said to be unequal to itself.

150E. (*c*) Further, if it is in itself, it must also encompass itself on the outside; and as container it will be greater
151. than itself, and as contained, less. In this way the One will be greater and less than itself.

On the surface this conclusion appears flatly to contradict the previous one and to be manifestly false. But Plato indicates that our point of view has shifted. The conclusion is expressly deduced from the earlier proof that the One is ‘ in itself ’. This meant that the One, considered as all the parts, is contained in the One as whole (145B). Accordingly we are now to think of the One as a whole and of the parts it contains. It remains to discover a sense in which the whole containing the parts can be greater than the parts it contains.

In discussing that earlier passage about the One as whole containing itself as all its parts, we noted that Plato repeated an axiom asserted by both Zeno and Gorgias: that ‘ whatever is must be somewhere ’. Since he was there concerned with physical bodies in space, the axiom was unobjectionable. We shall now find him repeating it again just below at the beginning of the next argument (151A). Gorgias, in the same context (quoted on p. 149), also asserted another axiom: ‘ the container is greater than the contained ’. Plato did not repeat this on the previous occasion; but he does repeat it here: it is necessary for his conclusion that the One as whole is greater than itself as the parts contained by the whole. It is hard to say how we are meant to take this argument. It may be one of the cases in which a false premiss of Eleatic origin is explicitly stated in order that we may see that a paradoxical conclusion can be obtained only by assuming that premiss. We have had a case of this sort in the proof (at 147A) that, if we assume (with the Eleatics) that what is one (or not one) in any sense must be one (or not one) in every sense, then difference cannot exist. And again the last argument of the previous section (149A ff.) showed that contact is impossible on the Eleatic assumption of a unique and indivisible One Being.

(*d*) Finally, there follows the proof that the One is unequal to the Others.

151A. (*d*) Also, there can be nothing besides the One and the Others. Further, anything that is must always be somewhere. And that which is in something will be in it as a less in a greater; only so can one thing be in another.

Now, since there is nothing else besides the Others and the One, and they must be in something, it follows at once that they must be in each other—the Others in the One
B. and the One in the Others—or be nowhere at all. Consequently, since the One is in the Others, the Others, as containing the One, must be greater than it, and the One, as contained by them, less than they. And since the Others are in the One, by the same reasoning the One must be greater than the Others, and they less than the One.

Therefore, the One is alike equal to, greater than, and less than, both itself and the Others.

This proof is prefaced by three axioms: (1) '*There is nothing besides* (*χωρίς*) *or outside* (*ἐκτός*) *the One and the Others.*' Whether the One and the Others are bodies which together make up the whole physical universe, or the One is the whole and the Others its contents, in either case there is no body left outside the whole and no empty space beyond it. On this point Plato and Parmenides agree. (2) '*Anything that is must always be somewhere.*' This, as we have seen, is a maxim used by Zeno and Gorgias, and adopted by Plato as true, if restricted to what they meant, namely physical body. (3) '*That which is in something must be in it as a less in a greater.*' This is Gorgias' maxim, which has just been applied to prove that the One as whole must be greater than itself, considered as its own parts.

From axioms (1) and (2) it is inferred, first, that the One must be in the Others. The alternative that it should be in itself (as in the previous argument) is ruled out. That is to say, the One no longer means 'all the parts'. If it means any one of the whole number of physical bodies, this will be in the Others, in the sense of being among them. The phrase ἐν τοῖς ἄλλοις has already been so used in the section on contact (148D). The Others will then surround and contain any one among their number.

It is also inferred that the Others will be in the One. If the One here is the whole and the Others its parts, this comes to the same thing as the previous argument. All the parts will be contained in the whole (145C). If we then accept axiom (3), that the container must be greater than the contained, the One will be greater than the Others and therefore unequal to them.

The interpretation above given of this difficult section remains somewhat unsatisfying. The last two arguments rest on the premiss, asserted by Gorgias and probably derived from Zeno, that the container must be greater than the contained ; and this appears to be false if the container is the whole, the contained, all the parts of that whole. It is possible that we should look below the surface here and bring into consideration Plato's later doctrine of the Great-and-Small or the Unequal as synonymous with the Unlimited. As we have seen, the account of this factor in Hyp. III makes it necessary to suppose that Plato had formulated the doctrine when he wrote the *Parmenides*. The terms 'great', 'small', 'equal', 'unequal', would immediately suggest it to the instructed Academic.

The application of these conceptions to magnitude and number may be illustrated by the views attributed to some Pythagoreans by Iamblichus (*in Nicom.*, 15, pp. 11 ff., Pistelli). The monad is the boundary between numbers and fractions ('parts') ; from it, as from a seed or root, proceed the ratios in either direction, decreasing with infinite division into parts, increasing with infinite addition. In magnitude the infinite division starts from the monad as whole ; while in number the infinite increase starts from the monad as unit, thus:

$$\frac{1}{n} \cdots \frac{1}{4}, \frac{1}{3}, \frac{1}{2}, 1, \frac{2}{1}, \frac{3}{1}, \frac{4}{1} \cdots \frac{n}{1}$$

These two series diverging from the One give a picture of the Indefinite Dyad of great and small or 'the unequal', extending without limit in both directions. The One can also be regarded as 'the equal', $\frac{1}{1}$. Each term in the two series, 'the double', 'the treble', etc., in one direction and 'the half', 'the third', etc., in the other, marks a point where the imposition of limit yields a definite quantity or number or ratio of numbers, as described in the *Philebus* (25A). In relation to the series of numbers the One is the indivisible unit, 1, from which the unlimited series of numbers is obtained by multiplication or by the addition of other units ('other ones'). In relation to the series of 'parts' the One is the whole which can be divided without limit.

We can take the axiom that 'there is nothing besides the One and the Others' as eliminating any question of magnitudes being 'in' a place other than themselves (as at 145D). We are not now concerned with that, but only with the sense in which one magnitude can be 'in' other magnitudes, or other magnitudes can be in one, in such a way that the container shall be greater than the contained.

We have already noticed that the conception of infinite divisibility was applied, in a curious way, at the outset, where it was argued that the One Entity, considered as a whole of parts, was indefinite in multitude (ἄπειρον τὸ πλῆθος, 143A). We have now advanced to the stage at which the One Entity has become a continuous magnitude. As such, it will be infinitely divisible in the usual sense. A definite quantity (ποσόν) is so much of something; and that something is, under its most general description, the unlimited or the great-and-small. This unlimited is a continuous and infinitely divisible range, of which a certain portion is marked off by the limits of our definite quantity. Now, if we consider the whole quantity as the sum of all the parts into which it *can* be divided, this sum will always be greater than the sum of any parts into which it is actually divided. Thus the One as whole will be greater than itself as all its actual parts. We shall thus have a valid interpretation of the third argument (*c*) 'that the One is unequal to itself'. This ran as follows:

'If the One (as all the parts) is in itself (as whole), it must also encompass itself on the outside. And as container (whole) it will be greater than itself (as parts), and as contained, less. In this way the One will be greater and less than itself.'

The dubious maxim becomes valid if we understand that the One is always more numerous than the parts into which it is actually divided, because it *can* always be divided into more parts. The limits of the definite quantity will always contain more parts than any number we have actually obtained.[1]

The occurrence here of two axioms, both used by Gorgias and at least one of them also by Zeno, suggests that Plato may be alluding to some Zenonian argument turning on infinite divisibility. I have already conjectured (p. 149) that Gorgias' axiom 'the container must be greater than the contained', was borrowed from Zeno. It may well have found a place in one of the dilemmas disproving the existence of a many. Now Simplicius (*Phys.* 140, 27) quotes the following from Zeno's treatise:

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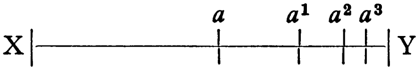
[1] Cf. Aristotle, *Phys.* 207*a*, 21: 'The infinite element in the complete constitution of a magnitude is matter, which is potentially, but not actually, a whole.' It needs to be supplemented by the formal element of limit in order to become a whole or limited thing. It is infinitely divisible; and, '*as infinite, it does not contain but is contained*', οὐ περιέχει ἀλλὰ περιέχεται, ᾗ ἄπειρον. He adds that this applies to Plato's unlimited, the great-and-small, which Plato makes the material or bounded element in the Forms (*Met.* 987*b*, 20) as well as in sensible things.

> ' If things are a plurality they must be just as many as they are, and neither more nor less. But if they are as many as they are, they will be finite in number.
>
> If things are a plurality, they will be infinite in number. For there will always be others between any of them, and again between these yet others. So things are infinite in number' (frag. 3).

Here Zeno first regards the many as a plurality of discrete units, which must amount to some definite number. He then shifts to the other point of view: the infinite plurality of parts into which a whole continuous magnitude can be divided. 'Thus', adds Simplicius, 'he demonstrates numerical infinity by means of the argument from dichotomy.' It is probable that the proof was developed at greater length in Zeno's work.

In the same context Simplicius quotes part of a similar argument, by which Zeno proved that 'if things are many, they must be both great and small: so small as to have no magnitude, so great as to be infinite'. Mr. Lee[1] points out that the argument turns on 'dichotomy', since it involves 'some relation between points on a line such that the series of points generated is an infinite series. And the infinite divisibility of the line easily gives us such a relation.



If we bisect the line XY at a, and the resultant line aY at a^1 and so on we get a series in which there is always a point "beyond" any given point. A series which fits very well Zeno's description, that "each one has a successor."' In this diagram the finite line XY is a whole greater than any number of parts into which it is divided by dichotomy—a container that is greater than the contained. The same conception figures in Achilles and the Tortoise.

Gorgias' maxim could easily find a place in a proof based on dichotomy. For example:

> However many parts there are in a whole, they must be just as many as they are; and hence the number of the whole will be finite.
>
> But there are always more parts between these many parts; indeed an infinite number. So the number of parts is infinite.

---

[1] *Zeno of Elea*, p. 31.

> But the parts are contained in the whole, and *the container must be greater than the contained.*
>
> Therefore the finite number of the whole is greater than the infinite number of the parts; which is absurd.
>
> Therefore, things are not a many.

If Plato was alluding to some such argument, he might here be turning the tables on Zeno by asserting that if you take the number of all *possible* parts as the number of the whole, and the number of the actual parts as the number of the parts, there is no absurdity in saying that the number of the whole must always be greater than the number of the parts, and the whole which contains will, in that way, be greater than the parts contained by it.

The same conception of the great-and-small will also make sense of the last argument (*d*) proving that 'the One is unequal to the Others'. As in Hyp. III, let 'the One' stand for the limiting factor in any one magnitude, and 'the Others' for the unlimited on which that limit is imposed. Then the One will be 'in the Others' in the sense that any magnitude, however great or small, must have beyond it the greater on one side and the smaller on the other, because there is no absolutely great or small magnitude. The Others, again, are '*in* the One', if we take the One to be the all-inclusive whole and the Others as its parts (the 1 and the fractions in the above diagram). The Others will then be the plurality of parts inside the One whole; and the whole will always be greater than any number of actual parts in the diminishing series.

Finally, we have now discovered a sense in which the great-and-small can be said to be *in* a limited magnitude: they are in it as the material factor contained within its limits. If we substitute this notion for the false conception put forward in the *Phaedo* and rejected in the first argument, we can find a satisfactory meaning for the thesis that 'the One is equal to the Others' or 'coextensive' with them. If we leave undivided the portion of the continuous range which falls within the limits, it will, as Parmenides said of his continuous and undivided being, everywhere exactly come up to the limits.[1] But, instead of arguing in this way, Plato preferred to turn that thesis into a disproof of the *Phaedo* theory.

[1] Yet another sense in which the One, as container and therefore greater, is equal to the Others, as contained and therefore smaller, is suggested by Anaxagoras' fragment on infinite divisibility (p. 56 above). He says that 'in itself each thing is both great and small', and that there is always a greater than what is great, and a smaller than what is small. He adds that '*the great is equal to the small in number*'. This means that, however many the parts into which you divide the greater, you can always divide the smaller into *as many* parts.

If this interpretation is correct, Plato certainly set his readers a hard task, confronting them with apparent contradictions, which could only be removed by bringing to bear the account of 'the Others' in the complementary Hyp. III, and perhaps recalling arguments used by Zeno. There is a similarly cryptic passage in the *Theaetetus*, where the same puzzles presented by great and small in size and number are propounded and left unsolved.[1] The later dialogues contain not a few passages which would be entirely unintelligible to the uninstructed reader ; for example, the composition of the World-Soul at *Timaeus* 35A, or the account of change and becoming at *Laws*, 894A. Only the more advanced students at the Academy could be expected to make them out, and some of them baffled the most learned Platonists of later days.

151B–E. *A One Entity (as discrete quantity or number) is equal and unequal both to itself and to the Others*

We here pass from continuous magnitude to discrete quantity or number. The gist of this section is that differences of quantity are always capable of numerical expression. It was remarked at 140B–C that equal quantities have the same number of measures ; while greater and less quantities, if commensurable, have a larger or smaller number of the same measures ; if incommensurable, have the same number of measures that are themselves larger or smaller.

151B. Further, the One, if greater, less, and equal, must be of equal measures with itself and with the Others, and also
C. of more and fewer ; and if of measures, then of parts. And, being of equal, more, and fewer measures, it will also be correspondingly fewer than, more than, and equal to, both itself and the Others in number. For if it is greater than anything, it will contain a greater number of measures and so of parts ; if less, a smaller number ; if equal, the same number.

Hence, the One, being greater and less than itself and also equal, will contain more and fewer and the same
D. number of measures, and hence of parts. So, as having the same number of parts, it will be equal to itself in number, and as having more or fewer, more or less than itself in number.

A number is a definite plurality of discrete units. The One, meaning any one quantity, was declared to be equal to itself in the sense of coextensive (ἐξ ἴσου). If it is divided into actual parts (units), it will of course have as many parts as its 'material' element has been divided into. In what sense can it be more and fewer than itself? We conjectured that the paradoxical statement that the One was unequal to itself might mean that any limited quantity always contains more possible parts than those into which it is actually divided. That interpretation seems to be confirmed by the present statement, which shows that in the former passage Plato had in mind the division of the quantity into parts, and that 'the Others' could mean these parts.

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[1] *Theaet.* 154B–155D. See F. M. Cornford, *Plato's Theory of Knowledge*, pp. 41 ff.

151D. The One will also stand in the same way to the Others. Since it is seen to be greater and smaller and of the same magnitude as the Others, it must also be more, fewer, and equal to them in number.

Thus, once more, it appears that the One will be alike
E. equal to, and more and fewer than, both itself and the
Others in number.

Here it seems to be assumed that there is a simple interpretation of the proposition that the One is equal to the Others in magnitude (μεγέθει). There is no reference to the elaborate refutation of the *Phaedo* theory (at 149E–150D), with its negative conclusion that the One could *not* be greater or less than the Others, and so must be equal. There is, in fact, a quite simple interpretation, if we take the One to be the whole and the Others all its parts: the number of the whole will be the total number of the parts. We have also seen how, if the notion of infinite divisibility is introduced, the number of the One can be greater or less than the number of the Others.

As a curiosity of Pythagorean speculation, rather than as relevant to this section, mention may be made of the classification of numbers as (*a*) excessive, (*b*) defective, and (*c*) perfect.[1]

(*a*) An excessive number (ὑπερτελής) is one whose (aliquot) parts amount to more than the whole. Thus the parts of the number 12 are:

the half = 6
the third = 4
the quarter = 3
the sixth = 2
the twelfth = 1
—
Total 16

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[1] Nicomachus, *Introd.* I, xiv, p. 36. Theon, p. 45.

(*b*) A defective number (ἐλλιπής) is one whose parts amount to less than the whole. For instance, the parts of 8 are:

the half = 4
the quarter = 2
the eighth = 1
Total 7

(*c*) A perfect number (τέλειος) has parts equal to the whole. Thus the parts of 6 are:

the half = 3
the third = 2
the sixth = 1
Total 6

This classification offers a sense in which one number as a whole can be said to be equal to, or greater, or less than, its parts; but there is no sign that Plato has this in mind in our passage.

Equally irrelevant, probably, are Theon's remarks on the indivisibility of the arithmetical unit. Following the Pythagorean tradition, he observes that any number other than 1, when divided, is diminished and divided into parts less than itself, as when we divide 6 into 3 and 3, or into 4 and 2, or into 5 and 1. And if we take 'the One in sensible things' (i.e. any one sensible body) and divide that, then as body it is diminished and divided into parts less than itself, but as number it is increased; for instead of one it becomes many. So in this respect the unit in number is indivisible. For nothing is divided into parts greater than itself; but when one thing is divided, it can be divided into parts which are *numerically* more than the whole or equal to the whole. Thus if we divide one body into 6 parts, 1, 1, 1, 1, 1, 1, each of these parts is numerically equal to the whole; if we divide it into 4 and 2, these parts are numerically greater than the whole; for as number 4 and 2 are more than 1. Therefore the unit in number must be indivisible (Theon, p. 18).

151E–155C. *A One Entity (as above qualified) exists in Time, and is and is becoming, and is not and is not becoming, older and younger than itself and the Others.*

In the earlier sections successive determinations were added to the original conception of 'One Entity', until it became a physical body with position in space and the capacity for motion and rest. We have since studied certain relations that such a thing will have to other similar things or to its own parts or elements. We now add a further determination of which such a body is capable: existence in time. This is a pre-condition of all those forms of change or becoming which will later be distinguished, viz. coming into existence and ceasing to exist, combination and separation, becoming like or unlike, and increase and decrease. But it is interesting to observe that this section on Time comes after the remaining form of change, motion in space, which has already been established at 145E. This is in accordance with the universal Greek view that local motion is prior to time, which is the measure of motion.[1] Thus, in the *Timaeus* space and time are on different footings. Space is an ultimate given factor, not created by the Demiurge; it is a pre-existing framework, without which there can be no visible extended universe. But Time is a feature of the order which the Demiurge introduces; and Plato describes the circular motions of the heavenly bodies before he passes on (at 37C) to the bodies which have those motions and are the 'instruments of Time'. The parts of Time are days and nights, months and years, and these came into existence 'at the same time' that the heaven itself was framed. Nothing that we call Time can exist without these units of measurement, and these again cannot exist without the periodic revolutions of the heavenly clock.[2] This view of Time as dependent on local movement accounts for the position of the present section between the section on locomotion and the discussion of the other forms of change.

In the following analysis of time relations it is explained, more openly than elsewhere, that the various statements are made from different points of view, and that 'the One' and 'the Others' have various meanings. Thus in one context 'the One' means one part of a whole, 'the Others', the other parts of that whole; but elsewhere 'the One' means the whole, 'the Others', all the parts of the whole. Or 'the One' can mean any one thing, 'the Others' being other ones external to it. Also 'one' (τὸ ἕν) sometimes means the unity which a whole or a part may possess. If these distinctions are observed, there are no fallacies or antinomies. The coming sections give a subtle and exhaustive review of the statements commonly made about existents in time.

151E. Next is the question whether the One exists in time, and, as so existing, both is, and becomes, younger and

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[1] Cf. *Plato's Cosmology*, pp. 102 ff., on the ancient view of Time as associated with circular movement.

[2] Ar., *de caelo*, 279*a*, 15, 'Time is the number of motion, and without a natural body there is no motion.'

151E. older than itself and the Others, and also neither is, nor
becomes, younger or older than itself or the Others.

Since the One *is* one, of course it has being ; and to ' be '
means precisely having existence in conjunction with time
present, as ' was ' or ' will be ' means having existence in
152. conjunction with past or future time. So if the One is,
it is in time.

The above is really a definition of existence in time, together with the assertion that the ' One ' with the qualifications already given to it, i.e. any thing which is extended in space and can move, has existence in time. The word ' is ' or ' being ', which has hitherto been used in a wider sense applicable to any entity, is now confined to existence in, or at, or during, some time, which must be either past or present or future. This is a good example of a definition cast in the misleading form of an inference.

The following paragraphs explain in what ways something that exists in time can be said (*a*) to *be becoming* older and younger than itself ; (*b*) to *be* older or younger than itself, (*c*) neither to be becoming, nor to be, older or younger than itself, but to have the same age.[1]

152A. (*a*) Time, moreover, is advancing. Hence since the One
moves forward temporally, it is always becoming older
than itself. And we remember that what is becoming older
becomes older than something that is becoming younger.[2]
So, since the One is becoming older than itself, that self
must be becoming younger.
B. Therefore, in this sense, it is becoming both younger and
older than itself.

This is the current conception of Time as the ' everflowing stream ', itself advancing and carrying temporal things with it.[3] One thing borne forward on this stream will leave its former selves further and further behind. As a man grows older, the baby he once was may be said to become relatively younger. This way of speaking may be unfamiliar, but it is not fallacious.

In the next paragraph we have a different picture. All time is conceived as a stationary frame stretching indefinitely in both directions. It is like a calendar in which every event has a date. A thing which exists in time is imagined as travelling over a certain span, as it were from the date of its birth to the date of its death. When we say 'it *is* older than it was', we mean that it is so *at* (κατὰ) the date which it has reached. Now, as it travels, it is always at some date which is, for the moment, its present; and at every such moment we can say of it that it *is* (now) older than it was. The thing must always be *at* its own present date ('coincide with the present'); it can never be getting ahead of its own present date into the interval between that and some future date. So, from this point of view, we can never say 'it is now (at its own present date) *becoming* older'; we can only say 'it has been becoming older and now *is* older'; and we can say this of it at *every* moment from the beginning of its existence.

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[1] In this section Burnet's division of paragraphs is once more misleading.

[2] Cf. 141A, B.

[3] Critias, frag. 18, *ἀκάμας τε χρόνος περί τ' ἀενάῳ ῥεύματι πλήρης φοιτᾷ τίκτων αὐτὸς ἑαυτόν.* Aesch. *Eum.* 852, *οὑπιρρέων χρόνος.* Simplic., *Phys.* 705, 8, *δοκεῖ δὲ ἡ αὐτή πως ἔννοια εἶναι χρόνου καὶ κινήσεως· ῥύσιν γάρ τινα καὶ ὁ χρόνος καὶ χορείαν ἐνδείκνυται.* Ar., *Phys.* 219*b*, 9.

152B. (*b*) Also it *is* older when, in this process of becoming,
it is *at* the present time which lies between 'was' and
'will be'; for of course, as it travels from past to future,
it will never overstep the present. So, when it coincides
C. with the present, it stops becoming older; at that time it
is not becoming, but already *is*, older. For if it were
getting ahead, it could never be caught up by the present,
since to get ahead would mean to be in touch with both
the present and the future, leaving the present behind and
reaching out to the future, and so passing between the
two. Whereas, if it is true of anything which is becoming
that it can never pass beyond the present, it constantly
D. stops becoming when it is at the present, and it then *is*
whatever it may be that it was becoming. This applies
to the One: when, in becoming older, it coincides with the
present, it stops becoming and *is* then older. Moreover,
it is older than the thing it was becoming older than, namely
itself. And older means older than a younger. Hence the
One is also younger than itself at the time when, in becoming
older, it coincides with the present. But the present is
E. with the One always throughout all its existence; for at
whatever time it is existing, it is existing 'now'.

Therefore, at all times the One both is, and is becoming, older and younger than itself.

Finally (*c*) there is obviously a sense in which a thing must always be of the same age as itself.

152E. (*c*) Also in thus being or becoming it cannot take a longer time than itself; it must take the same time. But

152E. if it is, or is becoming, for the same length of time, it is of the same age, and so neither older nor younger.

Therefore, the One, which is and is becoming for the same length of time as itself, neither is nor becomes older or younger than itself.

We now pass from considering one thing by itself in relation to time to considering its temporal relations to others. The various meanings of 'the One' and 'the Others' in the several paragraphs are either explained or easily inferred. We shall find that the One (*a*) *is* older and younger than the Others, and (*b*) *is* neither older nor younger, but of the same age; also that the One (*c*) is not *becoming*, and (*d*) is *becoming*, older and younger than the Others.

152E. Next, is the One similarly related to the Others? (*a*)
153. Things other than the One, being different things and not *a* different thing, are more than one: *a* different thing would be one, but different things must be more than one and have plurality. Hence they have a number greater than that of the One. And of a number the lesser part comes, or has come, into being before the greater part; and first
B. of all the least, namely the One. Thus in all things that have number the One comes first; and the Others, being others and not an other, are always things that have number. And what comes first comes earlier; while the Others, coming later, are younger.

In this way the Others will be younger than the One; the One older than the Others.

'The Others' here are not numbers (for numbers themselves are not in time, and do not come to be), but things which '*have* number'. Two is the smallest number (plurality of units); one is the unit. We are to imagine the Others as the sum of all the parts of a thing which comes into existence part by part, as a wall is built by adding one brick at a time. The One or unit is the brick which is laid first and so the first to become part of the wall. Next there will be two bricks, then three, and so on. In the history of the wall the One is 'older' than any or all of the Others.

In the next paragraph 'the One' is defined as the whole, and 'the Others' as its parts. The wall, as the one whole, comes into being when the last brick has been laid, and so is 'younger' than all its parts.

153B. Again, the One can have come to be only in a way con-
C. sistent with its own nature. Now we saw that the One

153C. has parts, and hence a beginning, an end, and a middle.[1] And the beginning of anything, whether it be the One itself or any one of the Others, always comes into being first; and after the beginning, all the rest up to the end. Moreover, by 'all the rest' we shall mean parts of the whole or One; and this itself comes to be, as a one or whole, at the same moment as the end. But the end is the last part to D. come into being; and it is the nature of the One to come into being simultaneously with the last. Hence, if the One must come to be in a way consistent with its nature, we must say it is the nature of the One, as having come into being at the same time with the end, to come later than all the Others.

Therefore, the One is younger than the Others, the Others older than the One.

(*b*) Next, 'one' (τὸ ἕν) is taken as meaning either the unity which must belong to every part as well as to the whole,[2] or that which has this unity, is 'one thing'. Every brick that we add is one brick, and at any stage in the building the part already constructed will be one part, just as every number is one number. Thus at every step from the first unit to the completed whole there will be 'one thing' in existence.

153D. But again, a beginning or any part whatsoever of the One or of anything else, if it is *a* part and not parts, must be one. So 'one' must come to be along with the first E. part that comes to be, and again along with the second part, and cannot be lacking to every subsequent part that is added, until, on reaching the last part, a one whole is formed; it cannot be missing at the formation of any part, first, middle, or last. Therefore the One is of the same age as all the Others; so that, if the One is not to contradict its own nature, it will have come to be neither before nor after the Others, but at the same time.

154. Thus, according to this argument, the One will be neither older nor younger than the Others, nor they than it; whereas by our former argument it was both older and younger, and so were the Others.

So much for what it *is* and *has* become.

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[1] The reference is to 142D and 145A. But 'the One' and 'the Others' have, of course, been used in other senses. This statement and the statement just below that 'all the rest' (all the Others) means the parts of the one whole, are really definitions for the purpose of the present argument.

[2] Cf. 158A, every part of a one whole must be *one* part, and in that way 'partake of unity'; and 142E.

We pass now to the senses in which the One is *becoming*, or is not becoming, older and younger than the Others. Here 'the One' means simply any one thing which exists in time, 'the Others' means any other such things.

(*c*) The first point is that, if one child is born a month before another, the first child will always *be* a month older, as the two travel throughout their lives. He will not, from this point of view, be *becoming* older.

154A. Next there is the question whether the One is becoming both older and younger than the Others, and they than it, and also not becoming younger or older: does the case stand with becoming as with being, or not?

B. (*c*) If one thing actually is older than another, it cannot
be becoming older still, nor the younger younger still, by
any more than their original difference in age; for if equals
be added to unequals, the difference that results, in time
or any other magnitude, will always be the same as the
original difference. Consequently what *is* older or younger
C. can never be becoming older or younger than what *is*
younger or older,[1] the difference in age being constant at
all times. The One is or has become older, the other
younger; but neither is becoming so.

Therefore, the One, if it *is* so, is not becoming, either older or younger than the Others which *are* so.

(*d*) The next point is argued with unnecessary elaboration, because Plato chooses to apply it both to the One (first unit) which is older than the Others (units added later) and to the Others (parts) which are older than the One (whole). But there is really only one point, for which the same illustration will serve. If the first brick is laid a month before the last completes the wall, this difference in age remains constant, as we have just seen. But as time goes on afterwards, the month becomes a smaller and smaller fraction of the total ages of the first and last bricks, and they may be said to be becoming more and more nearly of the same age. If this approximation is rather oddly described in terms of 'becoming (relatively) older or younger', there is nothing fallacious in the thought.

154C. (*d*) From another point of view, both are becoming older and younger. We have seen that (α) the One is older than

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[1] It is clear from the context that *τό γε ὂν τοῦ ὄντος* must mean *τό γε ὂν* (*πρεσβύτερον ἢ νεώτερον*) *τοῦ ὄντος* (*νεωτέρου ἢ πρεσβυτέρου*). So again with *τὸ ἓν ὂν τῶν ἄλλων ὄντων* below (c 3).

154C. the Others, and (β) they are older than it.[1] (α) When the
One is older than the Others, it has, of course, been in
D. existence for a longer time than they. Now, if an equal
time is added to a greater time and to a less, the greater
will exceed the less by a smaller fraction. Hence, the
difference in age between the One and the Others will not
remain into the future what it originally was ; the addition
of the same time to each will make the difference in age
constantly less. And if a thing differs less in age from
E. something than it formerly did, it must be becoming
younger than it was relatively to those things in relation
to which it was formerly older. And if it is becoming
younger, those other things in their turn must be becoming
older than they were in relation to it. Hence what has
come to be < later and is > younger [2] is becoming older
in relation to what has come to be earlier and is older :
it never *is* older than the other, but it is always becoming
so, since that other is progressing towards being younger,
155. while it is progressing towards being older. And the older
thing, in its turn, is becoming younger than the younger
in the same way. As the two move in contrary directions,
they are becoming each other's contrary—the younger
becoming older than the older, the older becoming younger
than the younger ; but they can never finally become so ;
if they did, they would no longer be becoming, but would be
so. As it is, each is becoming older and younger than the
other : the One is becoming younger than the Others,
because, as we saw, it is older and came into existence
B. earlier ; the Others are becoming older than the One,
because they came into existence later. By the same
reasoning (β) the Others stand in the same way to the
One, since, as we saw, they are older and came into existence
earlier.

(*Summary.*) Thus, from the point of view (*c*) in which there is no question of one thing becoming either older or younger than another, since their distance in age remains always the same, the One will not be becoming older or younger than the Others, nor they than it. But from another point of view (*d*) in which the difference between

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[1] This refers to 153A–B : the first brick laid is older than the other bricks subsequently added to the wall ; and 153C–D : the wall, as the one whole, is younger than all its parts (the Others).

[2] The sense seems to require that we should read : *τὸ μὲν νεώτερον ἄρα ‹ὂν καὶ ὕστερον› γεγονός.*

155C. things which come into existence earlier and later must be a constantly diminishing fraction, the One and the Others must be becoming both older and younger than each other.

So the conclusion of all these arguments is that the One both is, and is becoming, older and younger than itself and than the Others; and also neither is, nor is becoming, either older or younger than itself or than the Others.

The whole of this section on time is far from being a parade of sophisms. It is a remarkably lucid and sound analysis of time relations, implying conceptions which, had they been further developed, might have played an important part in mathematics. It is openly explained that the superficially conflicting statements are made from different points of view, and that the meaning of 'the One' and 'the Others' varies. This is an encouragement to believe that the same holds of other more obscure sections, and that there also we are meant to discover the senses of 'the One' and 'the Others' which will give the statements a valid meaning.

155C–E. *A One Entity (being in Time) has existence and becomes. It can be the object of cognition and the subject of discourse*

155C. Now, since the One is in time and has the property of
D. becoming older and younger, it has a past, a future, and a present. Consequently the One was and is and will be; and it was becoming, is becoming, and will become.

Parmenides, having denied the possibility of any becoming or change, said of his One Being 'nor was it ever, nor will it be, since it is now all at once'. 'How could what is be going to be in the future? And how could it come to be? For if it came into being, it *is* not; nor *is* it, if it is at some time going to be' (frag. 8, 5 and 19–20). Without motion or change, there is no passage of time. But the evolution in Hyp. II has deduced the possibility of motion, and existence in time has now been added to the previous attributes clothing the One Entity. Thus we have arrived at something which is capable of 'becoming' in all its senses: coming into existence and changing, i.e. coming to be this or that which it was not before. This statement prepares the way for the next sections, which study a problem involved in the notion of becoming in time.

Moreover, the collection of attributes now accumulated makes up all the conditions necessary for the existence of a *sensible* body, if we were right in understanding the 'unlimited' as a general expression covering all the opposites of sensible quality. So the argument has 'evolved' from the bare notion of a 'One Being' the possibility of a world of concrete sensible things; and we can claim that it has provided every form of cognition—knowledge, opinion, sense-perception—with its appropriate object. In the earliest stages the objects of knowledge—Forms and numbers—had their place; and at the end we have the object of perception, the sensible body.

> 155D. Also, it can be said to *have* something, and there can be something *of* it, alike in past, present, and future. So there can be knowledge and opinion and perception *of* it; in fact we are now exercising all these activities with respect to it. Further, it will *have* a name and can be spoken of;
> E. indeed it actually is being named and spoken of. And all the other characters which belong to any other things of which the above statements are true, belong equally to the One.

It is easy to detect here a reference to Parmenides' assertions that only his unique and indivisible One Being could be 'thought of or truly named', and that opinion or belief (*δόξα*) and perception (*αἴσθησις*) were objectless and illusory. Starting from Parmenides' own ultimate datum, a One Being, Plato has carried his deduction across the barrier at which Parmenides' goddess 'put an end to her trustworthy reasoning about the truth'. There is nothing irrational in attributing some sort of existence to the objects of belief and perception, and taking them as the subjects of discourse.

Since Proclus' commentary does not extend beyond the first Hypothesis, we are not well informed as to the expedients whereby the conclusions reached in Hyp. II were reconciled with the Neoplatonic thesis that *Νοῦς* and the world of its intelligible objects, the Forms, are here portrayed. Wundt has accepted this doctrine, with the exception that the identification of *Νοῦς* with its objects is not Platonic. Otherwise, he thinks that in Hyp. II the world of intelligible Forms is unfolded out of the One of the first Hypothesis, and that the whole of Hyp. II is concerned with the relations of Forms to one another. Some who do not accept this thesis yet hold that the Others 'are just the other Forms'.[1] This assumption entails the formidable task of explaining what can possibly be meant by the whole series of proofs. If the One and the Others are consistently identified with Forms throughout, Plato is apparently committed to demonstrations that the Forms have shapes, are situated in space, are capable of motion, can touch one another, grow older and younger than one another in time, and are objects of sense-perception. M. Wahl and Signor Paci have essayed this task. I cannot here give a fair picture of their methods and results, still less attempt to criticise them. The reader must be left to consider the previous question, whether it is necessary, for the sake of bringing the second part of the dialogue into relation with the first, to assume that the One and the Others of Hyp. II are the Forms. If they are not, Plato's arguments can be taken at something much more like their face value.

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[1] Burnet, *Gk. Ph.* i, 262, endorsed by M. Diès: '*Les Autres sont . . . les Formes autres que celle de l'Un, envisagées dans leurs relations avec l'Un*' (*Parménide*, p. 35).

HYPOTHESIS IIA

COROLLARY ON BECOMING IN TIME

Up to this point the series of arguments, following a logical order, has corresponded closely with the series in Hyp. I, which ended here with the denial that bare Unity without being could be the object of any cognition or even be named and spoken of. After that there could be nothing more to be said about it. But now we have arrived at the notion of a sensible thing which exists and becomes and changes in time, and there is something more to be said. There are several ways of 'becoming'; and a peculiar problem is presented by any sort of becoming in time: the question *when* exactly becoming can take place. Accordingly an appendix or corollary is here added, which, if inserted earlier, would have marred the correspondence with Hyp. I. It is confined to two subjects: the distinction of the various sorts of becoming and change, and the time problem they all involve. It has no claim to the status, which many assign to it, of a ninth independent Hypothesis. That would destroy the symmetry of the whole set of Hypotheses. Also we are not here starting again from the beginning to deduce once more all the consequences of supposing a One which is. We are starting from the result which has just been reached at the end of that deduction: a one thing which exists and becomes in time. This is clearly stated in the opening sentence.

155E–156B. *A One Entity (being in Time) comes into existence and ceases to exist, is combined and separated, becomes like and unlike, and increases and diminishes*

This section distinguishes and defines the various sorts of 'becoming' to which a sensible body existing in time is subject. The first is coming into existence and ceasing to exist.

We are told immediately that the ' One ' in question is ' a One such as we have described ', invested with all the attributes enumerated in Hyp. II. It is in time or capable of existing in time (μετέχον χρόνου), and it can be at one time what it is not at another, that is to say, it can ' become ' what it was not before. It is true that the statement, ' it is one and many and *neither one nor many* ' appears, at any rate, formally to include the One of Hyp. I, which was declared to be neither many nor even one (137C, 141E).[1] But this should not lead us to imagine that the present passage offers some sort of Hegelian synthesis reconciling an antinomy. A quite different turn is given to the expression ' neither one nor many ' in the following context. A thing can be one at one time and many at another time ; so it must change from being one to being many, and this change must take place in some sense ' in time '. But we shall see that, strictly, at the moment of change it is neither one nor many (157A). And the same will be said of any pair of opposite properties which a thing has at one time and has not at another. At the moment when the thing exchanges one property for its opposite it can have neither.

Another possible explanation is this. The species of change presently to be enumerated include combination, which is ' becoming one and ceasing to be many ' and separation, which is ' becoming many and ceasing to be one '. These definitions recognise a sense in which ' being one ' and ' being many ' are incompatible states. A physical body can either be dispersed in separate parts or form one aggregate. In this sense it cannot be both one and many at the same time. The opening description of the sort of One we are now discussing as ' both one and many and neither one nor many ' (or ' one and many and not one and not many ') may be intended to provide for this case, in which the thing can be either ' one and not many ' or ' many and not one ' at different times. If so, the description is simply part of the definition of the type of entity under consideration, and not based on any previous conclusions.

The property of existence is taken first. In Hyp. V we shall find existence clearly distinguished from the ' being ' which must belong to any ' One Entity ', whether it exists or not ; and it will be shown that many true statements can be made about a non-existent entity. In the present paragraph existence (οὐσία) clearly has this restricted sense. We have assumed throughout that the

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[1] There appears to be another case in which the results of an earlier Hypothesis are similarly recalled, at the corresponding point in Hyp. V (162C), where it has just been shown that the One in question (a non-existent entity) has being in a sense, and we pass to considering whether it is capable of any sort of change.

One Entity has ‘ being ’. This it can never acquire or lose ; but it can come into existence at one time and cease to exist at another. The effect of the first paragraph is precisely to define this temporal sort of existence as distinct from the being which must belong also to things that are not in time.

155E. To take up the argument yet a third time : if there is a
One such as we have described—a One which is both one
and many and neither one nor many and is in time—it
follows that since it *is* [1] one, it has existence at some time ;
and again since it *is not* one, at some time it has not exist-
ence. And since it cannot both have and not have existence
at the same time, it can only have existence at one time
156. and not have existence at another. And there must also
be a time when it comes to possess existence and a time when
it ceases to possess it ; it can possess a thing at one time
and not at another only if there are times when it acquires
that thing and loses it. Now acquiring existence is called
‘ coming into existence ’ ; and losing existence is called
‘ ceasing to exist ’.
It appears, then, that the One, when it acquires or loses
B. existence, comes into existence and ceases to exist.

This amounts to a definition of ‘ becoming ’ and ‘ ceasing to be ’ in the restricted sense of beginning and ceasing to exist (γίγνεσθαι, ἀπόλλυσθαι) with an insistence on the fact that these events must be somehow situated in time. Three other forms of ‘ becoming ’ are next distinguished : first, ‘ becoming one ’ (combination) and ‘ becoming many ’ (separation).

156B. Also, since it is one and many and a thing that comes to be and ceases to be, when it comes to be one, its being many ceases to be, and when it comes to be many, its being one ceases to be. And as coming to be one it must be combined, as coming to be many, separated.

This defines combination (συγκρίνεσθαι) and separation (διακρίνεσθαι) as forms of change distinct from coming into existence and ceasing to exist. The pluralists who accepted Parmenides’ denial of any real ‘ becoming ’, substituted for coming into existence and perishing the coming together and separation of real things which could never begin or cease to exist.[2] Plato has here restored the distinction and recognised sheer coming into existence and ceasing to exist as actually occurring in the case of things which exist in time. They cannot be explained away or reduced to the mere rearrangement in space of unalterable and indestructible elements.

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[1] The statement that ‘ the One *is* one ’ is here taken to imply existence as well as asserting the possession of unity, as at 151E and 161C. The phrase ἔστιν ἕν could be rendered ‘ it exists (as) a one ’.

[2] See above, pp. 54–55.

156B. Further, when it becomes like or unlike, it is subject to assimilation or dissimilation.

Likeness and unlikeness here have a narrower sense than that defined earlier (139E, 148A), according to which two things were alike if the same statement (whatever it might be) could be truly made about both. Here likeness and unlikeness in quality must be meant. Change of quantity is separately recognised in the next sentence.

156B. Also, when it becomes greater or less or equal, it must be increased or diminished or equalised.

The classification of the kinds of becoming, change, and motion here (locomotion has already been dealt with at 145E and will be added in the next section) is more elaborate than the simple division of change into locomotion and alteration (*φορά* and *ἀλλοίωσις*, 138C). If ' alteration ' is taken as a generic term covering three species here discriminated, we have the following list :

Becoming and Perishing (gain and loss of existence).
Locomotion.
Alteration :
  (1) Combination and separation (becoming one, becoming many)
  (2) Assimilation and Dissimilation (in quality)
  (3) Increase and Decrease (in quantity).

This should be compared with the list of physical (as distinct from psychical) motions at *Laws*, 893C ff. :

A. *Locomotion.* Revolution in the same place and motion from place to place are described with obvious reference to the rotation of the universe as a whole and the orbital revolutions of the planets.

B. *Alteration.* As in our passage, this generic term is not actually used ; but we find all the three species. They are described at greater length than in our passage, in terms which have been satisfactorily explained[1] by reference to the account in the

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[1] By Mr. J. B. Skemp of Gonville and Caius College in an unpublished dissertation on Plato's Later Theory of Motion.

Timaeus of the transformation of the simple bodies (fire, air, water) into one another.[1]

(1) *Combination and Separation.* A moving body which encounters another at rest is split asunder. Two moving bodies meeting one another from opposite quarters combine to form one body intermediate between them.[2] The *Timaeus* 56C ff. tells how fire-pyramids, air-octahedra, and water-icosahedra are broken down in their encounters, and how when water meets fire the fragments recombine in octahedra of the intermediate air. This gives a more concrete meaning to the definition in the *Parmenides* of combination as ‘ becoming one ’ and of separation as ‘ becoming many ’. Many fire-pyramids can become one icosahedron of water and vice versa.

(2) *Increase and Decrease* (in size) are consequent upon Combination and Separation respectively, ‘ when the existing constitution persists ’.[3] This seems to refer to the increase or decrease in the bulk of particles which occurs when (say) water of one grade of size is transformed into water of another grade. In that case the ‘ constitution ’ of water persists. An example occurs at *Timaeus* 58E, where the process of melting metal involves ‘ the reduction in bulk of the particles ’ of water to icosahedra of a smaller grade, without any transformation into fire or air.[4]

(3) *Assimilation and Dissimilation* (in quality) follow upon Combination and Separation ‘ when the existing constitution does not persist ’. Fire, for example, is then transformed into air and ceases to exist as fire ; so this ‘ change into another constitution ’ is described as destruction (*ἀπόλλυται*, 893E, *μεταβαλὸν δὲ εἰς ἄλλην ἕξιν διέφθαϱται παντελῶς*, 894A) ; but what our passage calls ‘ assimilation ’ (to the victorious body) appears to be meant. *Laws*, 897A, speaks of change of qualities (hot and cold, heavy and light, white and black, hard and soft, bitter and sweet) as supervening on separation and combination, increase and decrease. The transformations of the imperceptible particles are revealed to the senses in such alterations of quality.

C. *Generation* (*γένεσις*) occurs ‘ when a starting-point (*ἀϱχή*) receives increase and reaches the second stage, and from that the third, and so by three stages acquires perceptibility for percipients '.[1] Discussing the passage, Miss A. T. Nicol[2] writes: 'The *ἀρχή* is the indivisible line, the second stage the indivisible surface, the next the indivisible solid, and the last is the solid perceived by the senses. We see now why there is no mention of indivisible lines in the *Timaeus*. The *Timaeus* is a myth of the physical world, and therefore has no need to go further back than the surface, the stage where in descending from the *ἀρχή* the third dimension becomes possible; for without the third dimension there is no sensation.' The *Laws*, in fact, gives here a brief account of those 'remoter principles' (prior to triangular surfaces) which are 'known to men favoured by Heaven' (*Timaeus*, 53D). It describes the 'generation' of the simple perceptible physical body from its ultimate starting-point. Once generated, such bodies can move in space, combine and separate, and undergo increase, decrease, and alteration. What is here called 'generation' is rather a logical than a physical process. Particles of visible fire do not actually develop from an indivisible line into a perceptible solid. Consequently there is no opposite physical process of 'destruction' either. The words for 'destruction' or 'ceasing to be' are accordingly applied to transformation whereby e.g. fire ceases to be fire and becomes air. It is a total alteration in which the nature or constitution of fire completely disappears, but is replaced by another. The *Laws* concludes with the summary statement (1) that *coming to be* is this process of change and transition; (2) that a thing *is*, as something that actually exists (*ὄντως ὄν*), so long as it persists; and (3) that it *ceases to be* altogether when it is transformed into another constitution.[3] If this explanation of the *Laws* passage is sound, we need not, perhaps, infer that the theory of the constitution and transformation of the simple bodies had already been worked out by Plato when he wrote the *Parmenides*. However this may be, our passage in the *Parmenides* is the earliest enumeration of all the kinds of becoming and change recognised later by Aristotle.

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[1] See F. M. Cornford, *Plato's Cosmology*, pp. 224 ff.

[2] 893 E, *προστυγχάνοντα δ' ἑκάστοτε ἑκάστοις, τοῖς ἑστῶσι μὲν διασχίζεται, τοῖς δ' ἄλλοις ἐξ ἐναντίας ἀπαντῶσι καὶ φερομένοις εἰς ἓν γιγνόμενα μέσα τε καὶ μεταξὺ τῶν τοιούτων συγκρίνεται.*

[3] *Ibid.*, *καὶ μὴν καὶ συγκρινόμενα μὲν αὐξάνεται, διακρινόμενα δὲ φθίνει τότε ὅταν ἡ καθεστηκυῖα ἑκάστων ἕξις διαμένῃ (= αὔξησις* and *φθίσις)· μὴ μενούσης δὲ αὐτῆς δι' ἀμφότερα ἀπόλλυται (= ὁμοίωσις* and *ἀνομοίωσις).*

[4] *Plato's Cosmology*, p. 250. For the phrase *ἡ καθεστηκυῖα ἕξις* (*Laws*, 893E), cf. *Tim.* 59A, a metal, when solidified again after being melted, ‘ settles into its original state ’ (*εἰς ταὐτὸν αὑτῷ καθίσταται*).

156C–157B. *The transition in becoming and change is instantaneous*

'Becoming' in all the senses above distinguished implies that a thing passes (*μεταβάλλει*) from one condition to another. The final question is: when does this transition occur? Plato takes the case of transition from being in motion to being at rest—a case no doubt suggested by Zeno's paradoxes about the impossibility of motion. In particular, the Pythagorean view that magnitude, motion, and time, all consist of a series of atomic units, and the objections offered by Zeno, had raised the question, what is meant by a 'moment'? Plato argues that the transition occupies no stretch of time at all, however short. There is no time during which a thing has ceased to be in motion and not yet begun to be at rest, but is changing from the one condition to the other. The same principle applies to all the forms of becoming.

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[1] *Ibid.*, *γίγνεται δὴ πάντων γένεσις . . . ὁπόταν ἀρχὴ λαβοῦσα αὔξην εἰς τὴν δευτέραν ἔλθῃ μετάβασιν καὶ ἀπὸ ταύτης εἰς τὴν πλησίον, καὶ μεχρὶ τριῶν ἐλθοῦσα αἴσθησιν σχῇ τοῖς αἰσθανομένοις.*

[2] *Indivisible Lines, C.Q.* XXX (1936), 125.

[3] 894A, *μεταβάλλον μὲν οὖν οὕτω καὶ μετακινούμενον γίγνεται πᾶν· ἔστι δὲ ὄντως ὄν, ὁπόταν μένῃ· μεταβαλὸν δὲ εἰς ἄλλην ἕξιν διέφθαρται παντελῶς.*

156C. But when, being in motion, it comes to a stand, or, being at rest, it changes to being in motion, it cannot itself occupy any time at all.[1] For this reason: suppose it is first at rest and later in motion, or first in motion and later at rest; that cannot happen to it without its changing. But there is no time during which a thing can be at once neither in motion nor at rest. On the other hand it does not change without making a transition.[2] When does it make the transition, then? Not while it is at rest or while it is D. in motion, or while it is occupying time. Consequently, the time at which it will be when it makes the transition must be that queer thing, the instant.[3] The word 'instant' appears to mean something such that *from it* a thing passes to one or other of the two conditions. There is no transition *from* a state of rest so long as the thing is still at rest, nor *from* motion so long as it is still in motion; but this queer thing, the instant, is situated between the motion and the E. rest; it occupies no time at all; and the transition of the moving thing to the state of rest, or of the stationary thing

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[1] *μηδ' ἐν ἑνὶ χρόνῳ εἶναι* cannot mean that it is altogether outside time and dateless. It must *μετέχειν χρόνου*. But at the instant of transition it does not occupy or fill any *stretch* of time.

[2] *ἀλλ' οὐδὲ μὴν μεταβάλλει ἄνευ τοῦ μεταβάλλειν* is an odd statement, intelligible only if we suppose that Plato shifts here from the common use of *μεταβάλλειν* for 'change' in general to the stricter sense of 'transition' or passing from any one state to another. *Μεταβολή* will be used again in this strict sense later (162B), where it is shown that a non-existent thing can *pass* from non-existence to existence, but cannot change in any more usual sense (move in space or suffer alteration). Or should we read *ἄνευ τοῦ ‹ποτε› μεταβάλλειν*? 'It cannot change without changing at *some* time. At *what* time, then, does it change?'

[3] Punctuate: *Ἆρ' οὖν . . . ὅτε μεταβάλλει — Τὸ ποῖον δή;* (interrupting)—*τὸ ἐξαίφνης*.

156E. to being in motion, takes place *to* and *from* the instant.[1]
Accordingly, the One, since it both is at rest and is in
motion, must pass from the one condition to the other—
only so can it do both things—and when it passes, it makes
the transition instantaneously; it occupies no time [2] in
making it and at that moment it cannot be either in motion
or at rest.

The same holds good of its other transitions: when it
passes from being in existence to ceasing to exist or from
157. being non-existent to coming ~~into~~ existence, it is then
between certain motions and states; it is then neither
existent nor non-existent, and it is neither coming into
existence nor ceasing to exist. By the same reasoning when
it passes from one to many or from many to one, it is not
either one or many, and it is not being separated or being
combined. Similarly when it passes from like to unlike
or from unlike to like, it is neither like nor unlike, and it
is neither becoming like nor becoming unlike. And when
B. it passes from small to great or equal or in the opposite
direction, it is not small or great or equal, nor is it being
increased or being diminished or being equalised.

All these changes, then, may happen to the One, if it
exists.

Plato's treatment of the instant as a point 'up to which' or 'from which' transition occurs reminds us of his remark that the point is 'a fiction of geometers'; 'he called a point the beginning of a line, while again he often spoke of indivisible lines.' [3] Aristotle, though he objects to defining a point as 'the beginning of a line' and asserts that even indivisible lines must have extremities, really took the same view as Plato's here. 'A point, he says, is like the *now* in time: *now* is indivisible and is not a part of time, it is only the beginning or end, or a division, of time, and similarly a point may be an extremity, beginning, or division of a line, but is not part of it or of magnitude.'[1] Some of Zeno's arguments against motion as conceived by his opponents were based on their notion of the instant or moment as an indivisible part or atom of time and of a stretch of time as made up of a number of such atomic parts succeeding one another. Analogously the line was conceived as a row of points. This view suggests that a point or an atom of time could be isolated and exist apart from its neighbours. Plato rejects that idea as a fiction, and with it the notion that transitions such as he describes can occupy an indefinitely minute *part* of time. Aristotle's discussion of time in relation to motion in *Physics*, IV, x–xiv, owes much to Plato's analysis.

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[1] This means that if a thing passes, say, from motion to rest, it is in motion *up to* (εἰς) the moment of transition, and at rest *from* (ἐκ) that moment. This is substituted for the description above (D 2) of the instant as the time *at which* (ἐν ᾧ) the transition occurs. That phrase would normally suggest a stretch of time *within* which a change occurs; but the instant is not a stretch of time *occupied* by the transition.

[2] For ἐν χρόνῳ meaning *taking* (a length of) time as opposed to instantaneous, cf. Ar., *E N.* 1174*b*, 7, δόξειε δ' ἂν τοῦτο καὶ ἐκ τοῦ μὴ ἐνδέχεσθαι κινεῖσθαι μὴ ἐν χρόνῳ, ἥδεσθαι δέ· τὸ γὰρ ἐν τῷ νῦν ὅλον τι. Mich. Eph., *ad loc.*, χρόνου τὸ ἄτομον εἶπε νῦν. δέδεικται δ' ἐν τῇ φυσικῇ ἀκροάσει ἐν τῷ ἕκτῳ βιβλίῳ (*Phys.* 233*b*, 33 ff) ὅτι ἐν τῷ ἀμερεῖ καὶ ἀτόμῳ νῦν οὔτε κινεῖσθαί τι οὔτε ἠρεμεῖν δύναται, ἀλλ' οὐδὲ γίνεσθαι ἢ φθείρεσθαι.

[3] Ar., *Met.* 992*a*, 20.

The view that this account of becoming constitutes a distinct Hypothesis is perpetuated by the Neoplatonising critics. It appears to be based partly on the Plotinian doctrine that this passage deals with a further emanation from the One, namely the World-Soul and all the other souls which are responsible for the sense-world, partly on the Hegelian notion that the One which is not or is beyond being (Hyp. I) and the One which is (Hyp. II) require to be, in some mysterious manner, synthesised in a One which both is and is not. Others, again, oppose the two Hypotheses as resulting respectively in a ' radical negation ' (nothing is true of the One) and a ' radical confusion ', in which ' every attribution is contradicted by a contrary attribution no less legitimate '.[2] But, if our interpretation is even approximately correct, the contrary attributions are not contradictory and there is no radical confusion in Hyp. II. It should also be clear that Hypotheses I and II do not form an ' antinomy ' or result in two contrary theses calling for a Hegelian reconciliation. The two Hypotheses start from suppositions stated in the same form of words, but, so far from being the same supposition, it has appeared that they actually contradict one another and hence naturally lead to opposite conclusions. Professor Taylor has pointed out that there is no justification for discovering in the *Parmenides* either the manœuvres of Hegelian dialectic or the deduction of Kantian antinomies. ' We have not in the *Parmenides* anything in the least degree like the Hegelian dialectic. There is no conception anywhere in the dialogue of a special connection between metaphysical speculation and a particular method; no systematic presentation of a series of categories as evolved from one another by the stress of an internal necessity.' Nor again, if we apply the term 'antinomy' to Parmenides' reasonings, is this to be confused with Kant's procedure in the Transcendental Dialectic. 'The Kantian antithesis consists of a parallel proof and disproof of the same proposition: the Platonic of the derivation of contradictory results from what is to all appearance one and the same premiss. Hence the final goal of the one is to demonstrate the equal validity or invalidity, as the case may be, of both thesis and antithesis; that of the other, as it is at least natural to suppose, is to establish one interpretation of the common premiss as against the other'.[1]

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[1] Heath, *Thirteen Books of Euclid*, i, 156, citing *de caelo*, 300*a*, 14, *Phys.* 220*a*, 1–21, 231*b*, 6 ff. Cf. Stenzel, *Zahl. u. Gestalt*, 80. Simplicius, *Phys.* 982, 2, *τοῦτο τὸ ἐν ᾧ πρώτῳ μεταβέβληκε τὸ μεταβεβληκός, οὐ χρόνος ἐστὶν ἀλλ' ἄτομόν τ πέρας χρόνου, ὅπερ ' νῦν ' καλοῦμεν, ὅπερ Πλάτων ' ἐξαίφνης ' ἐκάλεσεν.*

[2] L. Robin, *Platon* (1935), p. 131.

Least of all can the Hegelian scheme be compatible with any interpretation of the first two Hypotheses on Neoplatonic lines. If the first is an account of an unknown God beyond being and the second an account of Intelligence and the Ideas at a lower level of emanation, there can be no question of any synthesis or reconciliation involving the conception of becoming in time. Finally, I have not been able to understand how Plato's businesslike account of the instant (τὸ ἐξαίφνης) at which the various species of change occur can be connected with the 'sudden' vision of the Beautiful (Wahl, p. 171) and the doctrine of *Anamnesis* (Speiser, p. 47). The only link appears to be the use of the word ἐξαίφνης in its normal sense of 'suddenly' at *Symp.* 210E, and *Ep.* vii, 341D.

If we now review the whole course of the dialectical exercise up to this point, the results are as follows. Hyp. I showed that from the notion of a bare unity which negates any kind of plurality, nothing can be deduced or evolved. Parmenides, who insisted on the absolute unity and indivisibility of his One, was logical in so far as he inferred the non-existence of anything else: there could be no 'Others', no plurality of real things, no world of sensible appearances. But he was not justified in ascribing to his One itself any further attributes. It could not even exist or be the object of any kind of knowledge. He did, however, regard it as existent and knowable, and he called it not only 'One' but 'One Being'. Hyp. II started afresh from this notion of a One which has being, and showed that such a One, just because it is not absolutely one, unique and indivisible, can have some of the further attributes which Parmenides deduced, but equally well other attributes which he denied. It can have many parts or aspects or elements; and there can be 'Others', in a number of different senses. If we add (as Parmenides did) the attributes of spatial extension and shape, there is no reason why it should not have motion and all the kinds of change in time. In fact there is nothing to arrest our thought from proceeding all the way from the conception of a ' One Entity ' to the existence in space and time of a multitude of physical bodies, capable of motion and of every kind of change, and perceptible by the senses.

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[1] *Mind*, N.S., No. 19, pp. 325–6.

As against Zeno, Plato has triumphantly disproved his fundamental assumption that the same thing cannot have two contrary attributes. The One of Hyp. I can have no attributes at all. The One Being of Hyp. II can have a whole string of contrary attributes, provided we observe those distinctions which Zeno ignored in the meanings of ambiguous terms.

By casting the whole into the form of a deduction, I understand Plato to indicate that there is no logical barrier such as Parmenides' goddess set up between the deductions of the first part of his poem and the mythical cosmogony of the second part. The existence of a manifold and changing world in time is not an irrational or self-contradictory illusion of mortals. Reasoning will carry us all the way from Parmenides' own hypotheses of a One which has being to the notion of the sensible body with contrary qualities. The Pythagorean evolution, starting from the Monad and ending with the sensible body, is restored and justified. But this train of reasoning simply postulates the addition of one attribute after another, in a logical order. It must not be confused with an account of how a sensible world could actually come into existence, by ' emanation ' from a supreme One. There is no hint of any moving cause. The production of a sensible world can be explained only in the imagery of a creation myth such as we find in the *Timaeus*.

In studying the relations of ' the One ' to ' the Others ', we have already learnt a good deal about these ' Others ' and been led to distinguish various senses of the term. But in accordance with the original plan, the next step will be to consider these Others on their own merits, and what are ' the consequences for them ' of the same supposition as in Hyp. II of a One which has being and is capable of all the other attributes we have ascribed to it.

HYPOTHESIS III

The supposition here is the same as in Hyp. II. This means that all the consequences of that Hypothesis are taken as established. It was there shown that, since plurality follows directly from the notion of a One that has being, there is nothing illogical in supposing an indefinite number of things which, by the addition of successive qualifications, can become a multitude of bodies situated in space and capable of motion and rest. From that point (146B) onwards we heard of the relations which one such thing could have to 'the Others'. These Others could be regarded as simply the other members of a set of such things, differing numerically from any one member which we choose to call 'the One' (146D). This is the conception of the Others from which we start here. There is no need to deduce once more the possibility of their existence. The Others will correspond to the One at every stage in the 'evolution'. There will be a One and Others, whether we are speaking simply of a mere One Entity, or of the unit of number, or of numbers as wholes, or of Forms, or of geometrical magnitudes, or of sensible bodies existing in space and time. The recognition that there must be Others at all these levels escapes the difficulties that beset interpreters who assume either that the Others here (and in Hyp. II) are 'the other Forms' only, or that they are not the Others of Hyp. II but 'the sensible world'.

This Hypothesis is, accordingly, short. The first section establishes the relevant definition of the Others, as against different possible senses of 'things other than the One', or 'other than one'. It points out that the Others, as here defined, form one whole set, each member of which also is one. The second section points out that these 'other ones' are complex, each containing, besides the unity which it has, an unlimited element which has that unity but can be conceived in abstraction from it. Finally, it is briefly remarked that, when the two factors are combined in limited things, these 'other ones' can possess all the contrary attributes which Hyp. II has ascribed to the One. The conclusion is that there is no ground for asserting, with Parmenides, that a One Being must be unique. There may be, and indeed are, any number of other one-beings (πολλὰ ὄντα).

157B–158B. *If the One is defined as One Entity which is both one and many or a whole of parts (as in Hyp. II), the Others, as a plurality of other ones, form one whole, of which each part is one.*

The expression 'things other than one' or 'other than the One' (ἄλλα τοῦ ἑνός) is highly ambiguous. As we have already seen, 'one' or 'the One' has several meanings, and there are also several ways of being 'other' (146B ff.). Plato is concerned here to define a sense of 'things other than the One' which will allow of such things existing, having each its unity, and being the subjects of true statements ascribing to them the whole series of contrary attributes in their relations among themselves. It is pointed out that 'things other than the One' is to mean, in the first place, things that are not identical with 'the One'. This is true whether 'the One' means 'unity' or any 'one thing' from which the Others are distinguished as other things. We are also to understand 'other than one' as meaning that the things so called are not 'absolutely one' (πάντελῶς ἕν) like the One of the first Hypothesis. They are a plurality; but none the less they possess unity ('partake of the One') in two ways: they form a group which is *one* whole of many parts, and each part is *one* part. Thus the Others are defined, as a limited plurality of ones, which are not some one thing but are other ones.

157B. We have next to consider what will be true of the Others, if there is a One. Supposing, then, that there is a One, what must be said of the things other than the One?

Since they are other than the One, they are not the One;
C. if they were, they could not be other than it. Yet the Others are not wholly destitute of the One (unity),[1] but partake of it in a way. For things other than the One are others as having parts; if they had no parts they would be absolutely one. And parts, we say, are parts of a whole; while a whole must be a one consisting of many, and the parts will be parts of this one whole.

This is the first point to be established. These Others, which are 'other than the One' in the sense of not being some thing which we choose to designate as 'the One', are a definite plurality. This is expressed by saying that they 'have parts': they form a set of which the things composing it are parts. But that means that they form one complete whole. Thus the Others possess the unity which belongs to a whole. This conclusion will presently be stated clearly. But Plato thinks it necessary first to forestall the objection that the things forming the set called 'the Others' might be regarded as parts, not of a *one* whole, but of a 'many'; for the Others admittedly are a many.

157C. For each part must be part, not of a many, but of a whole. For this reason: if a thing were to be part of a many,
D. among which itself were included, then it would be a part of itself—which is absurd—and also a part of every one of the rest, since it is supposed to be a part of them all. For if there is one of them of which it is not a part, it will be a

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[1] Throughout the following context 'The One' (τὸ ἕν) is used where 'unity' is obviously meant. To 'partake of the One' means 'to be one' or 'to have unity'.

157D. part of the remainder exclusive of that one; and, if we
proceed in that way, it will prove not to be a part of each
successive one that we take; and so, not being a part of
each one, it will not be a part of any one of the many.[1]
But if a thing is a part (or whatever else you please) of no
one of a number of things, it cannot be a part of all those
things, of no one of which it is a part. Therefore a part
is part not of many or of all, but of a single entity[2] or
E. 'one' which we call a whole, a complete 'one' composed of
all. Hence if the Others have parts, they must also possess
wholeness and unity.

Therefore, the things other than the One must be one complete whole having parts.

The set of things called 'the Others' being now defined, as a whole which has unity, it is next asserted that each part or member of this whole also is to have unity, as *one* part among a number of other parts from which it is distinct.

157E. Further, the same reasoning holds of each part: it is
also true of each part that it must have unity. For if
158. each of them is a part, 'each' means that it *is one* thing,
distinct from the rest and having its independent being,
if we are to call it 'each'.[3] As having unity, it will plainly
be other than unity; otherwise it would not have unity,
but simply be unity itself; whereas nothing but unity
itself can be unity. But both the whole and the part must
have unity: for the whole is *one* whole, of which the parts
are parts; while every part that is part of a whole is *one*
part of that whole.

This whole section amounts to (1) the definition of a certain sense in which we can speak of 'things other than the One', and (2) the implied assertion that there is nothing irrational in supposing things so defined to exist. We have in fact supposed in Hyp. II that there is a plurality of Others, each of which is one thing, and shown that the One can have various relations to them. The One was regarded sometimes as a whole of which the other ones are parts ; sometimes as any one thing with other ones alongside it.

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[1] *καὶ οὕτως ἑνὸς ἑκάστου οὐκ ἔσται μόριον, κτλ* can also be rendered 'consequently it will not be a part of *each* of that many, and not being a part of each, will be a part of *none* of them' (Taylor). But the above translation (which agrees with Diès) seems better logic.

[2] *μιᾶς τινος ἰδέας*, not 'Form', but merely 'entity' or 'thing', as (e.g.) the syllable is described as 'not the letters, but a single *εἶδος* arising out of them, having *ἰδέαν μίαν* of its own', and as *μία ἰδέα ἀμέριστος* at *Theaet.* 203E, 205C. Some misconceptions of the meaning have been founded on the assumption that *ἰδέα* means 'Form' here.

[3] This sentence is hard to translate. The meaning seems to be that 'each' (*ἕκαστον*) is equivalent to 'any one thing'; as a *thing* (*ὄν*) it has its own *being*, is an entity; and as *any one* it is '*distinct* from all the rest'.

The application of ' the One ' and ' the Others ' as so defined remains very wide and general. ' The One ' may be simply ' one entity ', ' the Others ' other ' one-entities '. We shall then be asserting, as against Parmenides, that there is nothing against a plurality of one-entities. Or the One may be the universe, the Others all its parts ; the universe is not an indivisible one. Or the One may be any Platonic Form, the Others other Forms, which may or may not be parts of it. Or the One may be any one thing existing in time, the Others other such things, whether parts of it or existing independently alongside it. At all these levels One and Others may, and in fact do, exist. There is no logical justification for the Eleatic denial of a plurality of ones, or for Socrates' original suggestion that the Form, Unity itself, must be in no sense a plurality (129B).

158B–C. *When the element of unity is abstracted from any one whole or one part, what remains is an element of unlimited multitude*

It has been asserted that the ' other ones ', as a limited plurality, must form *one* complete whole of parts, and each of them must be *one* part of that whole. In those ways they possess unity and are limited. Now one whole must consist of *many* (more than one) parts, and one part must be one of *many* parts. We are now invited to remove the element of unity and consider, in abstraction, what remains—the element which, if we can imagine it as separately existing, may be said to ' come to acquire unity ' when unity is added. This other element is declared to be mere multitude (πλῆθος), which, being without the element of unity, has no limit of number. The limit of number is precisely what we impose upon this other indefinite factor, when we add unity. The addition of unity will give us one whole with just *so many* parts, or one part among just *so many* other parts. In the absence of unity, we are left with an indefinite something, of which so much can be taken to form one whole or one part.

This other element is what Plato calls the indefinite dyad, or the great-and-small, or the Different or Other (τὸ ἕτερον, τὸ ἄλλο). We have already invoked it above (p. 155) as providing a possible interpretation of the statements about the One as whole being greater than the One as all the parts, and so on. It is an element present in anything you can call ' one thing '. In the case of number it is the more-and-fewer, an indefinite maniness. Any number, defined as a definite plurality of units (1 is indivisible and not a number), is more than 1 and fewer than some other larger number. There is, as it were, a continuum of maniness, along which you can mark off any number of units or measures. But beyond any point at which you stop there will always be more. In magnitude the analogous element is the large-and-small, for any magnitude has the possibility of larger magnitudes on one side and smaller on the other, and is infinitely divisible internally. In sensible qualities, again, there are indefinite continua, like hotter-and-colder, always admitting of the more-and-less. Aristotle tells us that, in Plato's later doctrine, this unlimited factor or Dyad was the ' material ' element, not only in sensible but in intelligible things.

When unity is added, we have ' one thing '—a definite number, a limited magnitude, a definite degree of heat-and-cold, and so on. When the other element is said to ' come to acquire unity ', this does not imply that the indefinite can ever actually exist without the element of limit. There is no number which is not one number, no quantity which is not ' so much ', and so on. Plato merely wishes to concentrate attention on the presence of this second element in any ' one thing '. It is that which is ' other than one ' in the sense that it is distinguishable from the unity of a ' one thing ' and so can be conceived, though it can never actually exist, apart from that unity. In the next sentence this element is called ' things that have unity (partake of the One) '. The plural is used because this element is conceived as multiplicity, or a manifold ; hence it is described as a ' many ' (πολλά). When the element of unity is present, this ' many ' will possess unity and be one thing or a definite plurality of parts each of which is one, such as we have been describing. But we are now to think of it as a multiplicity which has not yet acquired unity ; and it will then appear as ' without limit of multitude ' (πλήθει ἄπειρα).

158B. Now things that have a share in the One (possess unity) will be different from the One that they share in (the unity they possess). And things different from the One will naturally be many ; for if the things other than the One were neither one nor more than one, they would be nothing.

The ambiguities of expression here give an appearance of fallacy. But it is only another case of a definition disguised as a deduction. Plato is leading up to his conception of ' multitude ' or multitudinousness, which is not a plurality or ' many ' in the usual sense, not a number of units ; for every number and every unit *has* unity, but we are now to think of multitude without any unity. It is added that this factor is infinitely divisible.

158B. Moreover, since both things that *have* the unity of a part and things that have the unity of a whole [1] are more than one, it follows that those things which come to *acquire* unity, must, just in themselves, be without limit of multitude.[2] We may see that in this way. Evidently, at the time when they come to acquire unity they are not one and
C. do not possess unity. So they are multitudes [3] which do not contain unity. Now if we choose to take in thought from such multitudes the least portion we can conceive, that portion also, if it does not possess unity, must be not one but a multitude. And if we go on in that way considering, just by itself, the nature other than the form,[4] any portion of it that comes into view will be without limit of multitude.

158C–D. *The combination of the unlimited element with limit or unity yields the plurality of other ones*

From the conception of ‘ what is other than one ’ as indefinite multitude we now return to the ‘ other ones ’ defined at the outset. There can be any number of ‘ other ones ’, each of which is formed by the introduction of the limiting factor of unity into the unlimited.

D. Further, when each single part becomes a part, they now have a limit in relation both to one another and to the whole ; and so has the whole in relation to the parts. Thus

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[1] *τά τε τοῦ ἑνὸς μορίου καὶ τὰ τοῦ ἑνὸς ὅλου μετέχοντα.* Just as *τοῦ δικαίου μετέχειν* is exactly equivalent to *εἶναι δίκαιον*, so *τοῦ ἑνὸς-μορίου* (or *ἑνὸς-ὅλου*) *μετέχειν* is equivalent to *εἶναι ἓν μόριον* (or *ἓν ὅλον*). The phrase means the subjects (as we should say), whether wholes or parts, which have unity as predicate.

[2] *πλήθει ἄπειρα.* Not ‘ infinite *in number* ’ or ‘ infinitely *numerous* ’, for there are no units or numbers of units. Cf. the use of *ἄπειρον* at 137D in a purely negative sense of a thing which has no extent at all. The statement here will be repeated in Hyp. VII, 164D.

[3] *πλήθη.* The plural has to be used because grammar provides only nouns which must be either singular or plural in ‘ number ’, and the plural is less inappropriate than the singular where we are eliminating unity altogether.

[4] *τὴν ἑτέραν φύσιν τοῦ εἴδους*, *la nature étrangère à la forme* (Diès), *das von dem Eidos verschiedene Wesen* (Friedländer). If the words are so rendered, ‘ the form ’ is the element of unity or limit, from which we are to abstract the other nature (the unlimited), which can acquire unity. It would also be possible to translate : ‘ the other element in the thing (or entity, *εἶδος*) ’, i.e. the element other than its unity. In either case the unlimited element is meant. Ar., *Met.* 1092*a*, 25, speaks of *τὸ ἓν* and *ἑτέρα φύσις* (the Indefinite Dyad), as if echoing this passage.

158D. the consequence for the things other than the One appears to be that from the combination of unity and themselves there comes to be in them something fresh, which gives them a limit with reference to one another; whereas their own nature gives them, in themselves, unlimitedness.[1]

Thus the things other than the One, both as wholes and part by part, are unlimited and also have limit.

The last sentence sums up both the foregoing sections. As limited, the Others are other ones, making up a whole with a limited plurality of parts, each of which is one limited thing. But if we remove the limiting element (unity) which makes these things each *one* thing, there will remain an unlimited element, which can be most easily imagined as an infinitely divisible continuum. This is the second possible sense of ' what is other than One ', which will allow of ' what is other than One ' existing (though never actually, apart from unity) and being the subject of positive statements. This unlimited factor, though it is not *one* thing or a definite number of things until unity is added, is yet not nothing at all. It is the subject which can possess unity as its attribute. It will be further described, in abstraction from unity, in Hyp. VII.

It should, perhaps, be emphasised that no sort of ' contradiction ' is here established. There is no attempt to argue that the Others must be both limited and unlimited in number. As a set of one-things they are limited in number and each one is limited by the factor of unity. Their unlimitedness is the second factor in their composition.

158E–159B. *The Others, so defined, have all the contrary characters proved to belong to the One Entity of Hyp. II*

This analysis of the Others into two factors, unity and the indefinite, applies to the Others as considered in the first section—the ' other ones ', forming one complete whole, of which each is one part. Consequently it applies equally to ' the One ', if by that we mean either the one whole of which the Others are parts, or one part from which the Others are merely distinguished as other parts. And, conversely, the ' other ones ' will have all the characters which have been found to belong to the One in the previous Hypothesis. Accordingly, the possibility of adding all those characters to the Others is now briefly asserted, with the merest indication of the way in which arguments of the same pattern could be used.

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[1] Ar., *Phys.* 203*a*, 10, *οἱ μὲν (Πυθαγόρειοι) τὸ ἄπειρον εἶναι τὸ ἄρτιον· τοῦτο γὰρ ἐναπολαμβανόμενον καὶ ὑπὸ τοῦ περιττοῦ περαινόμενον παρέχειν τοῖς οὖσι τὴν ἀπειρίαν*, seems to echo this sentence.

158E. Moreover they are also both like and unlike one another and themselves.

In so far as they are all unlimited in respect of their own nature, they have the same character; and also in so far as they all have limit. But in so far as they have both characters, limited and unlimited, they have characters
159. which are contrary to one another; and contraries are as unlike as possible. Thus in respect of either character singly they are like themselves and one another, but in respect of both characters taken together they are quite contrary and unlike both themselves and one another.

Thus the Others will be both like and unlike themselves and one another.

Also, since we have found this to be true of them, there will be no further difficulty in showing that the things other than the One are the same as, and different from, one another, and both in motion and at rest, and have all the
B. contrary characters.

The significance of these conclusions as a criticism of Parmenides' position is easy to see. Parmenides had insisted that his One Being, since it was 'one', must be unique and indivisible. As unique, it was not one thing with other 'one-things' alongside of it: 'there is and shall be no other besides that which is' (frag. 8, 36). As indivisible, it was not one whole consisting of parts each of which would be one thing (frag. 8, 22–25). Plato's argument simply points out that, since 'one' is an ambiguous word, there is nothing illogical in positing a One Being which is not unique, but has other 'one-beings' alongside it, and which is not indivisible, but a whole of many parts. This means that there can be any number of 'one-beings' possessing all the attributes which Parmenides legitimately ascribed to his One, as well as attributes which he illegitimately denied to it.

Zeno's proofs that there cannot be a plurality of things that are (πολλὰ ὄντα), were based on the assumption that a thing that is cannot have two contrary characters at the same time. Hyp. II has shown that, when due account is taken of the different aspects and relations which one thing may have, it can and must have contrary characters. Hyp. III asserts that there is no logical ground for denying any number of one-things, each possessing contrary characters.

As for the theory of Forms, the passage about the Unlimited throws new light on the manner in which individual things partake of unity. The unity they *have* is not the whole or a part of the Form, Unity itself, but an element of Limit imposed upon an unlimited nature, which, conceived in abstraction, would be bare multitude without any sort of unity. Plato, in this revised form, restores the primitive Pythagorean conception of the Limit and the Unlimited as the two chief opposites which combine to constitute Forms, numbers, geometrical magnitudes, and sensible things. Further light must be sought from the *Philebus*.

The foregoing interpretation of this Hypothesis regards the supposition that ' there is a One ' as identical with the supposition in Hyp. II, and the consequences for the Others as identical with the consequences there reached for the One. The upshot is that, at every level of being, whether we are speaking of Forms or numbers or sensible things, there will be a One and Others on the same plane and the same statements can be made about both. Such is the conclusion actually stated in the text. The interpretation, accordingly, differs from those which are inspired by the Neoplatonic conception of emanation and represent each successive Hypothesis as descending to a lower level of being, from the One ' beyond being ' to absolute nonentity.

HYPOTHESIS IV

The previous Hypothesis defined the Others as ' other ones ', in each of which the element of limit or unity is combined with the element of unlimited multitude. Of such other ones all the positive conclusions of Hyp. II held good. In abstraction from the limit, the unlimited itself was also called ' the Others ', and the present Hypothesis is concerned with this element. It supposes a One (unity) which remains entirely cut off from the unlimited factor, leaving it devoid of unity in any sense. There will then be no one definite thing, and so no single definite attribute that could be assigned to the indefinite Others. The fresh definition is given, as usual, in the opening paragraphs, which explain how the meaning of the fundamental supposition of a One is changed.

159B–D. *If the One (unity) is defined as entirely separate from the Others and absolutely one (as in Hyp. I), the Others can have no unity as whole or parts and cannot be a definite plurality of other ones.*

The supposition is stated in the same terms as in the previous Hypothesis : ἓν εἰ ἔστιν, ' if there is a One '. But, as we know well by this time, ' a One ' requires further definition. We are, accordingly, informed that this ' One ' is such that (1) it is separate (χωρὶς) from the Others, in the sense that there is nothing in which it and the Others can coexist ; (2) it is not a whole of parts, and cannot be *in* the Others in any way ; with the consequence (3) that the Others cannot be one or possess unity in any way.

159B. Suppose, then, we pass over those further consequences as obvious and consider once more whether, if there is a One, it will not also be true that things other than the One have none of these characters. Let us start again from the beginning and ask : If there is a One, what must be true of the things other than the One ?

The One, then, must be separate from the Others and they from it. For there is no further thing distinct from both the One and the Others ; when we have named the
c. One and the Others, we have named all things. So there is no further thing beside them, in which the One and the Others alike might be. Hence they are never in the same thing, and therefore must be separate.[1]

This is the first point in the new definition. In the last Hypothesis we considered in abstraction from each other the two elements —unity and the indefinite—which must be combined before you can have ' one thing '. We now treat this distinction as a complete separation of the two elements. ' The One ' means unity, or what Socrates called ' Unity itself.' If this is entirely separate from the other element, then ' there is no further thing in which the One and the Others alike might be ' : there is no ' one definite thing ' in which the two elements can be combined. The Others, in fact, are here not the ' other ones ', but mere multitude without unity.

159C. Also we cannot admit that what is really and truly one has parts. Therefore the One cannot be in the Others as a whole, nor can parts of it be so, if it is separate from the Others and also has no parts.

This is the second point in the definition. Unity is to be construed in the absolute sense, which negates any internal distinction of parts or elements. It follows that Unity itself is not ' one thing ' or ' one being ' (ἓν ὄν) ; for we saw in Hyp. II (142B) that a one being or one entity has two parts, its unity and its being. It was the existence of those two parts and of the difference between them that enabled us, without further help, to derive the whole series of numbers, and to represent both unity and being as ' parcelled out ' among any number of one-beings. These are the 'parts' whose existence is denied in the present passage. So the effect of this second point in the definition is to take us back to the supposition, formulated in Hyp. I, of a One which has no parts or distinguishable aspects but is purely and absolutely one. Hyp. I deduced the consequences for the One so conceived. The present Hypothesis deduces the consequences for the Others.

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[1] Contrast the argument at 151A that, since ' there is nothing beside the One and the Others, and whatever is must be somewhere, the One must be in the Others and the Others in the One.

The first consequence is that the Others cannot be defined as in the first section of the last Hypothesis. Since the separation of unity from the second element is to be complete, there can be no 'other ones'. If the One is to be one in every sense, the Others cannot be one in any sense: they cannot possess unity and there can be no 'one thing' among them. The situation is the same as in the proofs that, on the Eleatic assumptions, there can be not even numerical difference (147AB), or contact (149A–D).

159D. Consequently, the things other than the One, not possessing unity either in part or as a whole, can have no unity in any way. The Others, then, are not one in any sense, and there is no 'one thing' to be found among them.

It follows further that the Others cannot, as in the first section of the last Hypothesis, be a finite plurality of ones (πολλά), forming one complete whole. Without any 'one thing' to serve as unit there cannot be such a thing as a number, and the Others cannot be a 'many' in the usual sense (a plurality of ones). But it is not denied here that they are 'multitude' without unity, as in the second section of Hyp. III.

159D. It follows that the Others are not many either. For if they were many, each of them would be *one* part of the whole; whereas, in fact, not having unity in any sense, they are neither one nor many, neither a whole nor parts.

159D–160B. *The Others, having no unity, cannot possess any of the contrary characters*

The consequences of the above definition can be rapidly drawn. They are the same as those deduced for the absolute One of Hyp. I, and follow from the same complete separation of unity from everything else. There is no one definite thing and no number. This applies to the whole series of contrary characters. If none of these is one definite thing, the Others cannot possess *two* contrary characters or even one. 'No two or three (things) can be *in* them.'

159D. Nor yet, consequently, are the Others two or three, and
no two things or three things can be in them,[1] since they
E. are altogether destitute of unity.

It follows that the Others are not like the One, nor yet
unlike it: there is no likeness and unlikeness in them. If
they were like and unlike or had likeness and unlikeness in
them, they would then have in them two characters contrary
to one another. But, as we saw, it is impossible for things
which do not even possess unity to possess any *two* things.
Therefore the Others are neither like nor unlike nor both at
160. once; for, if like or unlike, they would have *one* of two
characters; if both, *two* contrary characters; and that we
have seen to be impossible.

Nor yet, accordingly, are they the same, or different, or
in motion, or at rest, or coming to be, or ceasing to be, or
greater, or less, or equal; nor have they any other characters
of that kind. If the Others admit any such character, they
will also admit of being one, two, three, odd and even;
B. and we have seen that they cannot have those characters,
being altogether destitute of unity.

The upshot is that, if the element of unity is entirely excluded from combination with the unlimited element, the unlimited or 'Other' is not one thing or a plurality of one-things, such as might possess attributes which would themselves be one-things. It will appear in Hyp. VIII that if unity is not merely 'separated apart' (as here), but blotted out altogether, the Others cannot exist at all. The unlimited actually exists only in combination with unity or limit. On the other hand, it is not explicitly denied existence here, but still conceived as bare 'multitude' in *abstraction* from the limiting factor, as in the second section of the previous Hypothesis—a multitude that is not a plurality (*πολλά*) of numerable units.

The application of this Hypothesis to Parmenides is as follows. His denial of the very existence of a many was the consequence of his isolating his One as a bare Unity which could have no relations to anything else, because there was nothing else. But if that was so, he had no right to attribute to it a number of definite characters other than unity, such as homogeneity, sameness, rest. If these characters are a plurality, each of them must be one, and there will be that plurality of things which the Eleatics denied. If they are not a plurality, then there are no other characters to be attributed to Parmenides' One, and every statement he made about it was illegitimate. Also, he did not see that, in speaking of his One Being as *having* unity and as full of extended and continuous 'being', he was really admitting an unlimited factor in combination with limiting unity and capable of being conceived in abstraction from unity, as an 'other'.

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[1] In the sense in which a character is *in* the thing which possesses it. The phrase δυοῖν τινοῖν μετέχειν is used synonymously below (E7).

We may also see a criticism of Socrates' over-insistence, in the *Phaedo* and the early part of our dialogue, on the separateness of the Forms. If we take his phrase 'Unity just by itself' as meaning that the Form Unity is just 'one' and nothing else and is isolated from all combination with other Forms, it will be in the same case as Parmenides' One. Also the other Forms could not be a plurality of ones; for no other Form could possess unity. Again, if Forms are cut off from everything else, they will be cut off from that other factor which might, by acquiring their character, become an individual thing. There will be no 'Others' in the sense of concrete sensible things. These can exist only when the unity of the Form acts as the limiting factor.

160B. *Ostensible conclusion of Hypotheses I–IV*

160B. Thus, if there is a One, the One is both all things and nothing whatsoever, alike with reference to itself and to the Others.[1]

This summary of the results of the first four Hypotheses, based on the positive supposition that 'there is a One', is, of course, merely an ostensible contradiction. It can be stated thus only because the different meanings of the supposition have been disguised. What were really quite inconsistent definitions of 'the One' or 'the Others' have been cast in the form of deductions, professing to follow from the same formula. As soon as they are seen to be alternative definitions, the conclusions of all four Hypotheses are sound and consistent with one another.

HYPOTHESIS V

In fulfilment of the demand that we should study the consequences of denying an hypothesis, as well as those of affirming it, Parmenides now turns to the negative supposition: 'If a One is not'. This yields another set of four arguments, balancing the four we have already considered. The fact that there are four and not merely two indicates, of course, that the negative supposition, like the positive, has at least two distinct meanings, which will lead to different consequences both for the One and for the Others. We shall, in fact, find that, in the remaining four Hypotheses, the negative formula, ἓν εἰ μὴ ἔστι, is taken, not merely in two, but in four distinct senses. As before, these senses are defined in the opening paragraphs, or clearly indicated as the arguments proceed. One main purpose is to attack Parmenides' position from the opposite quarter, his doctrine of Not-being: 'Never shall this be proved, that things that are not, are'; if a thing 'is not' in any sense, it 'is not' in every sense; it is simply nothing at all and nothing can be said about it. On this dogma later sophistry had based a number of fallacious arguments which contemporaries, unaware of the surprising number of ambiguities lurking in the words 'is not', were unable to refute. It was maintained, for instance, that all negative statements deny the existence of their subjects and are therefore about nothing at all; that all false statements, since they profess to state 'the thing that is not', must be meaningless; and so on. Plato's object is to expose at least some of these ambiguities, by showing that the same negative formula, taken in various senses, will lead to different conclusions.

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[1] A more complete statement of the conclusions is given by Heindorf's conjectural addition: . . . *καὶ πρὸς τὰ ἄλλα, ‹καὶ τὰ ἄλλα› ὡσαύτως* : '. . and to the Others, *and the same is true of the Others*'.

The first two negative Hypotheses are really more concerned with the ambiguity of 'not-being' than with the ambiguity of 'the One'. The object is to distinguish (1) something which is an entity but does not exist (Hyp. V) from (2) nonentity (Hyp. VI).

The meaning of 'is not' in the present Hypothesis can easily be inferred from the careful explanations of what it does not mean. It does not mean the denial of any sort of being whatsoever; we shall consider that in the next Hypothesis, which will lead to opposite results. We are told (160E ff.) that the One we are now concerned with 'has being in a certain sense', namely the sort of being that must belong to any subject about which true statements can be made. It is, in fact, an 'entity'. Nor is it true that only negative statements can be made about it; there is nothing against its having many characters which can be positively asserted. Moreover, by calling it 'one' we mean that it is one entity as distinct from others. We can have it before our minds and know that we are speaking of *this* one and not of any other. So the subject of the supposition we are now making is one entity that is distinguishable from others. It is thus clear that, when we suppose that such a thing 'is not', we are supposing that it *does not exist.* Plato has recognised earlier (155E) that there is such a thing as coming into existence and ceasing to exist, and that sheer 'coming to be' in this sense is not to be confused with the various sorts of change. If that is so, there must *be* things of which it can be truly said that they do not exist at one time and do exist at another. We are now to contemplate the notion of a one entity which does not exist, and consider what can be said about it. The description will apply to anything that has existed in the past, or will exist in the future, but does not exist now, and (perhaps we should add) to anything that might, but never does, exist.

160B–D. *If ' a One is not ' means that there is a One Entity that does not exist, this Non-existent Entity can be known and distinguished from other things*

The first paragraph concentrates attention, as usual, on the meaning of ' the One ', and we are led to infer that ' is not ' must mean ' does not exist '. What needs to be explained is that, when you deny the existence of something, there must *be* a something whose existence you are denying. The subject of your statement is not a blank nothing ; you have something before your mind and moreover a something that you can distinguish from other things. This seems to be the point made in the statement that ' if a One (ἕν) does not exist ' is the direct contrary of ' if a not-one (μὴ ἕν) does not exist '. We are taking ' a one ' to mean a ' one entity ' or ' one thing '. The opposite of this will be ' what is not one entity ', i.e. a nonentity or no-thing(μηδ' ἕν). So this statement tells us that the subject of our negative supposition is not a nonentity, but on the contrary an entity. A negative statement is not, as some had supposed, meaningless for lack of any subject that can be present to our thought and meant by our words.

160B. Good. We have next to consider what follows, if the One is not.

What, then, is the meaning of this supposition : ' if a One (one thing) does not exist ' ? [1] It differs from the supposition : ' if a not-one (no-thing) does not exist ' ; and
C. not only differs from it, but is the direct contrary.

Now suppose one says ' if largeness does not exist', or ' if smallness does not exist ', or any other statement of that type. Obviously in each case it is a different thing

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[1] So we must translate εἰ ἓν μὴ ἔστιν, which Plato here substitutes for the εἰ μὴ ἔστι τὸ ἕν of the opening sentence. ' If *one thing* (ἕν) or *a thing* (as opposed to *nothing*) does not exist ' is the real meaning. Diès misses this point and renders both phrases by *si l'Un n'est pas*. Taylor has ' if the one is not ' for the first phrase, ' if there is no one ' for the second, and later he uses the expression ' the non-existent one '. But it is not clear whether he regards the supposition here as different in meaning from the same formula in the remaining negative Hypotheses.

160C. that is spoken of as non-existent. And so in the present case, if a man says 'if a One (one thing) does not exist', it is plain that the thing he is saying does not exist is something different from other things, and we know what he is speaking of. So in speaking of a 'One' (one thing) he is speaking, in the first place, of something knowable, and in the second of something different from other things, no
D. matter whether he attributes existence to it or non-existence; even if he says it is non-existent, we nevertheless know what is said not to exist, and that it is distinguishable from other things.

The effect of the above definition is to rule out several other meanings which the words 'If a One does not exist' might bear. They do not mean any of the following suppositions: (1) '*There is no such thing as a one entity.*' If that were meant, nothing could be said about the One. (2) '*No one entity exists.*' There may be any number of entities in existence; their existence is in fact assumed in the sequel. We are merely taking the case of any one entity which does not exist. (3) '*There is no such thing as Unity*'; (4) '*There is nothing which has unity.*' Both these senses are inconsistent with our supposition; for the One we are supposing not to exist has unity. Plato is asserting that we can think of and talk about a thing which *is* a thing and is *one* thing distinguishable from other things, and yet does not exist. He is thus controverting Parmenides, who maintained that anything that 'is not' (τὸ μὴ ὄν) is entirely unknowable and cannot be thought or spoken of or even named; any statement professing to be about 'what is not' must be meaningless. Plato points out that even if 'is not' means 'does not exist', true statements can be made about a thing that does not exist; they are not meaningless. He proceeds to enumerate a whole series of such statements.

It is now clear in what sense and to what extent the present negative Hypothesis contradicts either of the positive Hypotheses I and II. Hyp. I proposed for consideration the notion of a bare 'One' which was to be just one and to have no second character. It was proved that such a One could have no being in any sense; it cannot exist and cannot even be an entity, a One *Being*; for its 'being' in any sense would be a character distinct from its unity. We are not now supposing that this sort of One does not exist, but that a One which is an entity and has many other characters does not exist. The present Hypothesis accordingly is not the contradictory of Hyp. I. Paradoxically enough, the non-existent One now to be considered has that 'being' which the One of that positive

Hypothesis had not. Hyp. II, on the other hand, posited a One which has being, a One Entity, and deduced the conclusion that such a thing, with certain added qualifications, could exist in time and be the object of every sort of cognition. We are not now supposing in Hyp. V that *no* such One Entity exists ; that supposition will be made in Hyp. VIII. The supposition here is that *one* such One Entity does not exist, though any number of others may exist and are in fact assumed to exist. Hence we can deduce a number of positive conclusions, which we could not deduce from the supposition that *no* One Entity exists or that there is no such thing as a One Entity. On this interpretation every argument in this Hypothesis has a valid meaning ; and I think it may be claimed that this is not the case on any other interpretation.[1]

160D–161A. *A Non-existent Entity, being knowable and distinguishable from other things, can have many characters*

Before proceeding to make a number of positive statements about ' a non-existent entity ', Plato insists that the definition already given implies the possibility of many such statements being made. There is no objection to a non-existent entity having many attributes, and a different character from those of other entities.

160D. Starting afresh, then, from this supposition : ' if a One (one thing) does not exist ', we are to consider what consequences follow.

First, it seems, this must be true of it, that there is knowledge of it ; otherwise the very meaning of the supposition that ' a One does not exist ' would be unknown.

Also, it must be true that other things are different from it ; otherwise it could not be spoken of as different from them. So, besides being knowable, it must have difference
E. in character ; for when you speak of the One as different from the Others, you are speaking of its difference in character, not of theirs.

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[1] Wundt (pp. 47 ff.) rejects the Neoplatonic view that this Hypothesis deals with the material world and holds that it is concerned with the participation of the Ideas in not-being ; but this is based on a misunderstanding of 160C, *ἑτερόν τι λέγοι τὸ μὴ ὄν* as equivalent to the identification in the *Sophist* of not-being with otherness (see below, p. 231). Paci's view (p. 159) is somewhat similar. Wahl (pp. 182 ff.) discovers here an ' *héraclitéisme des idées*', whereby the movement of thought is projected into things. Speiser (p. 53) thinks that *das nichtseiende Eins in Verbindung mit dem Sein* stands for copies or pictures of objects or dream-images and for their immaterial analogues, such as the Sophist. The non-existence in question is *der Schein*; and this is *irreale Existenz oder reale Unwirklichkeit* (p. 56).

The word here used for ‘ difference ’ (ἑτεϱοιότης) ought to mean difference in character or in kind, as distinct from mere numerical difference, which might be better expressed by ἑτεϱότης. It appears, however, that Plato never uses the word ἑτεϱότης. So it remains doubtful whether he is merely stating what the argument fully justifies—that the One must have the character of being numerically different from others, or means that there is no reason why it should not differ from them conceptually as well.[1]

160E. And further this non-existent One has the characters of being ‘ that ’ and ‘ something ’, and of being related ‘ *to* this ’ or ‘ *to* these ’, and all other such characters. If it were not ‘ something ’ and had not all those other characters, we could not have spoken of ‘ *the* One ’ or of things different *from* the One, or of anything as belonging *to* it or as being *of* it ; nor could we have spoken of it as ‘ something ’.[2] Thus although the One cannot have existence, if it does not

161. exist, there is nothing against its having many characters ; indeed it must, if it is *this* one, and not another, that does not exist. If what is not to exist is neither *the One* nor *this* and the statement is about something else, we ought not so much as to open our lips ; but granted that we are supposing the non-existence of *this One* and not of something else, it must have the character of being *this* and many other characters as well.

161A–C. *A Non-existent Entity has unlikeness to the Others and likeness to itself.*

Having established that there is nothing against making many true statements about a non-existent entity, Plato goes on to put forward a carefully chosen selection. Only two pairs of contraries are here mentioned : like and unlike, equal and unequal.[3] Here, as in the opening paragraph, ‘ the Others ’ are simply other things, which (as will presently appear) are assumed to exist.

161A. It follows that the One possesses unlikeness with respect to the Others. For the Others, being different, will actu-

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[1] At 161A, 7 ἕτερα seems to be synonymous with ἄλλα (numerical difference), and distinguished from ἑτεροῖα. At 164A, ἑτεροιότης is the contrary of ὁμοιότης. These passages support the view that difference of character is meant here.

[2] We have just said that characters belong *to* it and that there is knowledge *of* it ; and we called it ‘ *something* knowable ’ (γνωστόν τι, 160C, 7).

[3] Difference and Sameness are omitted because the difference of the One from the Others has already been asserted in the first section.

161A. ally[1] be of different character; that is, of other character;
B. that is, unlike. And if they are unlike the One, unlikes
must be unlike an unlike. Therefore the One also will
possess unlikeness, with respect to which the Others are
unlike it.

According to the definition of likeness given earlier (139E, 148A), two things are like when any one and the same statement can be made about both; unlike, when any statement true of the one is not true of the other. It follows that our one non-existent entity has unlikeness to other things (whether existent or not). The term ἑτεροῖος (like ἑτεροιότης, 160D) should mean different in character; and it can have this sense, if we take 'being *this* one' (and not *that* one) as a 'character'. The One is *this* one; the Others are not this one, but other ones; so something is true of the One which is not true of them.

161B. Moreover, if it has unlikeness to the Others, it must have
likeness to itself. For if the One has unlikeness to the
One, what we are speaking of will not be such as the One
in character; and our supposition will not be about a
C. One, but about something other than a One. But that is
inadmissible.

The One, therefore, must have likeness to itself.

This argument seems to amount to saying that the non-existent entity not merely has unlikeness to other things in that statements are *not* true of it that are true of them, but has a positive character of its own. This may be asserted for the sake of the later proof that it cannot change its character, 'for if it became other than itself in character, we should no longer be speaking of the One but of something other' (162D). Thus it will appear that it not only has likeness to itself but must have it always. Plato is content to have shown that a non-existent entity can have a character of its own, different from the characters of other things. He does not add any proof that the One has likeness to the Others or unlikeness to itself, though nothing would be easier, if the object were a display of sophisms or antinomies.

It should be noticed that the statements are very carefully worded. He does not say that the non-existent One *is* unlike the Others or *is* like itself; but only that it *has* unlikeness to the Others and

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[1] ἑτεροῖα καὶ εἴη ἄν. καὶ from its position should go with εἴη, not with ἑτεροῖα. It can be understood with reference to the point made below (161C), that the One cannot *actually be* unlike, unequal, etc., because it does not exist; but the Others, which are assumed to exist, can *actually be* so.

has likeness to itself; and both statements are inferred from the fact that the Others *are* different from it. The reason appears at the beginning of the next paragraph, where we are told that to say 'the One *is* equal to the Others' would imply that the One *exists* and actually *is* like them in respect of its equality. Such a statement would, in fact, be normally understood as implying that its subject existed as well as possessed unlikeness or likeness; and the intention is to rule out that implication, which is *ex hypothesi* false.

161C–E. *A Non-existent Entity (being a quantity) has inequality to the Others, and has greatness and smallness and equality*

The second pair of contraries, equal or unequal, apply only to quantities. So we are now concerned with what can be said of a non-existent quantity.

161C. Further, the One is not equal to the Others. If it were equal, that would at once imply that it exists and also *is* like them in respect of this equality. But both implications are impossible, if a One does not exist. And since it is not equal to the Others, the Others must be not equal to it. And things that are not equal are unequal; and unequal things are unequal to an unequal.[1] So the One has ine-
D. quality, with reference to which the Others are unequal to it.

There is a superficial fallacy in the inference: 'Since it *is not* equal to the Others, the Others must be *not equal* (unequal) to it'. All we are entitled to assert is that the Others *can be* not equal to it; and this does not follow from the fact that we cannot say it *is* equal to them. The fallacy, however, does not vitiate the conclusion.

This argument is cast in the same indirect form as the previous ones, for the reason above explained: we must not imply that the One exists. But the other quantities may be existent, and, if they are, the same objection does not hold to saying that they *are* unequal to it. And then, since whatever is unequal must have this relation to an unequal, we may say that the non-existent quantity *has* inequality, though not that it *is* unequal. We can, in fact, know about any non-existent quantity that it must be (if we do not take 'be' to imply existence) either greater or less than *any other* (different) quantity, whether existent or not; for the only difference between one quantity and another, just as such, is that one is greater or less than the other. So we may say that our non-existent quantity *has* inequality, with reference to which other quantities, if they exist, may be said to *be* unequal to it.

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[1] τῷ ἀνίσῳ, *à un inégal* (Diès); not 'in virtue of inequality'. The point is that unequals require something to be unequal *to*. Cf. 161B 2, ἀνομοίῳ τά γε ἀνόμοια ἀνόμοια.

It is next pointed out that to have inequality means having greatness and smallness; the great-and-small is, in fact, the indefinite element which is combined with unity in any one quantity, whether it exists or not. And intermediate between great and small there must be equality. Hence the non-existent quantity will *have* equality as well as inequality, though we must not say that it *is* equal. ' Equality ' is the element of limit, which our one quantity must possess, or it would not be *one*.[1]

161D. On the other hand, inequality implies greatness and smallness, and accordingly these must belong to such a One as we are describing. Now greatness and smallness are always kept apart from one another. So there is always something between them, and this can only be equality. Accordingly, anything that has greatness and smallness has also equality between the two.

E. So a One which does not exist will, it appears, have equality, greatness, and smallness.

This means that, just as we can know of any non-existent quantity that, being a *quantity*, it must be greater or less than any different quantity, so we can know that, being *one* quantity, it must have *some* definite magnitude, and so be ' equal ', as standing between larger quantities and smaller ones. As we have learnt (from 149D ff.), it cannot be absolutely small or great. Further, though we cannot say it *is* equal to the Others, we can say that it has equality, with reference to which some other quantities may *be* equal to it. Equality to ' the Others ', however, is not expressly mentioned.

161E–162B. *A Non-existent Entity has being in a certain sense*

We have just seen that a non-existent thing can have a character of its own distinguishing it from other things, and including certain relations (as we should call them) to other things. It is now pointed out that, since such statements are true of it, it must have that being which belongs to the subject of any true statement, even the statement that the subject does not exist.

161E. Further, it must in some sense even possess being. For it must be in the state[2] we are ascribing to it; otherwise

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[1] See above, p. 208.

[2] ἔχειν οὕτως ὡς λέγομεν, i e. the state of non-existence. But the words would also cover ' having any character that we are assigning to it ', such as likeness, etc.

161E. we should not be speaking the truth in saying that the One does not exist. If we are speaking the truth, evidently the things we are speaking of must *be*. So, since we do claim to be speaking the truth, we must also assert that 162. we are speaking of things that are. So it appears that the One *is* non-existent. If it *is not* non-existent, if it somehow slips away from being so to not being so, it will at once follow that it *is* existent. Accordingly, if it is not to exist, it must have the fact of *being* non-existent to secure its non-existence, just as the existent must have the fact of *not being* non-existent, in order that it may be possible [1] for it completely to exist. The only way to secure that the existent shall exist, and that the non-existent shall not exist, is this: the existent must have the 'being' implied in 'being existent' and the 'not-being' implied in 'not-being non-existent', if it is to have com- B. plete existence; and the non-existent, if it is to have complete non-existence, must have the 'not-being' implied in 'not being existent' and the 'being' implied in 'being non-existent'. Thus, since the existent has not-being and the non-existent has being, the One also, since it does not exist, must have being in order to be non-existent.

Thus it appears that the One has being, if it *is* non-existent, and also, since it *is not* existent, has not-being.

This passage justifies the use we have made throughout of the term 'entity'; indeed it amounts to a definition of 'entity'. Plato might be directly answering the argument of Gorgias [2]:

> That which is not, is not. For if that which is not is, it will both be and not be; since in so far as it is conceived as not being, it will not be, but in so far as it *is* a thing which is not, it will be. But it is altogether absurd that something should be and not be at the same time. Therefore that which is not, is not.'

Gorgias may well have copied this from some Eleatic writing, for it is sound Eleatic doctrine.

Plato's demonstration here is very remarkable. In conjunction with the preceding sections it clearly distinguishes 'is' meaning 'exists' from the 'is' represented by Plato's *μετέχει*, and asserts that any subject of a true statement containing this latter 'is' must have a sort of ' being ', distinct from existence. Otherwise any statement of the form ' *x* does not exist ' would be meaningless, being about nothing at all.

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[1] εἶναι can be retained, if ᾖ means 'it may be possible': '*pour qu'il puisse pleinement être*', Diès.

[2] Sext., *adv. math.* vii, 67 = Gorgias, frag. 3 (Diels).

162B–163B. *A Non-existent Entity can pass from the state of non-existence to the state of existence, but cannot change or move in any other way*

This section corresponds in position to the Corollary of Hyp. II and is concerned with the same topic : motion, change, becoming. Hyp. II ended with the proof that the One Entity has existence and becoming in time, and can be known and made the subject of discourse. The Corollary then opened with a statement in which the conclusions of Hyp. II (that the One is both one and many) appeared, at least, to be combined with those of Hyp. I (that the One is neither one nor many) in a somewhat misleading manner, though the following deductions were not vitiated by this procedure.

The present section seems to be an appendix on the same theme, and the first paragraph similarly contains a statement of previous results which is not justified by the immediately preceding section. It is stated that ' we have seen that the One *is*, and also *is not*, and accordingly is, and is not, in a certain condition ' ; and it is inferred that the One must pass from being in that condition (at one time) to not being in it (at another). Now, if this statement refers (as it superficially seems to refer) to the last section, it is obviously fallacious. The whole point of that section was to show that the ' being ' ascribed to the One was compatible with its not-being (= non-existence), and that both are asserted together when we say that it *is non-existent*. So we have not seen that the One is in two incompatible states, ' being ' and ' not-being ', and must pass from one to the other because it cannot be in both at once.

The fallacy is glaring ; and it is hard to believe that Plato could thus obliterate the fine and important distinction he has just drawn between ' being ' and existence. The only way to avoid it is to suppose that here, as at the beginning of the Corollary, Plato is making a fresh start and recalling the results of a previous Hypothesis, viz. that the One *is*, in the sense of ' *exists* '. Hyp. II gave us such a One Entity which exists, and the Corollary deduced conclusions about its capacity for change. It was shown that it could exist at one time and not at another, and so could pass from the one condition to the other at some instant. Now an entity which has not existence but can gain it is precisely a non-existent entity, such as we have now defined. And here we make about it the same statement : that it can *pass* from one state to the contrary state. The same word (*μεταβάλλειν*) is used in the same strict and unusual sense.[1] The states in question can only be non-existence and existence; for an entity cannot gain or lose the 'being' described in the last section and there contrasted with existence. In order to make sense we must translate the ambiguous statement *τὸ ἓν ὄν τε καὶ οὐκ ὂν ἐφάνη*, 'we have seen that the One is *existent* and also *non-existent*'. This rendering is supported by the phrase just below (162D, 6), *τὸ ἓν . . . οὔτε τὸ ὂν οὔτε τὸ μὴ ὄν* which must mean 'the One, neither when existent nor when non-existent'. The paragraph will then run as follows:

162B. Now a thing which is in a certain condition can not-be in that condition only by passing out of it. So anything
C. that both is, and is not, in such and such a condition implies transition; and transition is motion. Now we have seen that the One is existent and also is non-existent, and accordingly is, and is not, in a certain condition. Therefore the non-existent One has been shown to be a thing that moves, since it admits transition from being to not-being.[2]

However we account for the language, the conclusion meant is certain: that our non-existent entity can 'move' just in the way here defined: it can pass into existence; just as the One Entity of the Corollary could begin and cease to exist by a transition not involving any other change. It is next pointed out that this 'transition' (*μεταβολή*, *μεταβάλλειν*) is the only form of 'motion' that a non-existent entity is capable of. It cannot change in any other way, as the existing entity of the Corollary could: it cannot have local motion or undergo any 'alteration' or internal change of character (*ἀλλοίωσις* in the usual sense).

162C. On the other hand, if the One is not anywhere in the world of existence—and it is not, if it does not exist—it cannot shift from one place to another. Therefore it cannot
D. move by shifting its position. Nor yet can it revolve in the same (place), since it has no point of contact with what is the same; for what is the same is existent; and the non-existent cannot be *in* anything that exists. Therefore the One, if non-existent, cannot revolve in that in which it is not.

Nor can the One, either when existent or when non-existent, alter from itself in character; if it did, we should

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[1] See 156C ff., p. 200.

[2] *ἐκ τοῦ εἶναι ἐπὶ τὸ μὴ εἶναι*, either (1) 'from existence to non-existence' (and *vice versa*), or (2) 'from being (in the state of non-existence) to not being (in that state)' (and *vice versa*).

162D. no longer be speaking of the One, but of something other
than it.

If, then, it does not alter in character and neither revolves
in the same place nor shifts from one place to another,
E. there is no other motion it can have. And the motionless
must be at rest ; and, if at rest, stationary.

It appears, then, that the non-existent One is both at rest and in motion.

These conclusions are sound. Only that which exists in place and time can have local movement. And, if we speak of a non-existing thing coming into existence, we mean that the *same* thing does not exist at one time and does exist at another. If any internal alteration of character occurred, we could no longer say that just *that* thing had come into existence. Also any change of character must take place in time, and the non-existent is not in time. Thus, in respect of locomotion and of internal alteration a non-existent thing is ' at rest ', in the sense that there is no possibility of local motion and that it must retain its character.

But, although the non-existent cannot suffer any internal alteration and in that sense ' become unlike itself ' (ἀλλοιοῦσθαι ἑαυτοῦ 162D, 6), it can, as we have seen, ' move ' or pass from one condition (non-existence) to another (existence). In this transition, it does become ' unlike ' its former self, according to the earlier definition of ' unlike ' : a statement (that it exists) becomes true of it, which was not true of it before. Just to that extent, therefore, it may be said to ' become unlike ' (ἀλλοιοῦσθαι).

162E. Further, if it does move, it must become unlike, since in
whatever respect a thing moves, to that extent it is no
163. longer in the same condition as before, but in a different
condition. So, as moving, the One does become unlike.
Also in so far as it is not moving in any respect, it will not
be becoming unlike in any way. Consequently, the non-existent
One, in so far as it moves, becomes unlike ; and
in those respects in which it has no motion, it does not
become unlike.

Therefore, the non-existent One both becomes, and does not become, unlike.

And a thing that becomes unlike must *come to be* different
from what it was, and must *cease to be* in its former condi-
B. tion ; while what does not become unlike does not come to
be or cease to be. And so the non-existent One, as becoming
unlike, comes to be and ceases to be ; and as not becoming
unlike, it does neither.

163B. Thus the non-existent One both comes to be and ceases to be, and also does not come to be or cease to be.

As we have seen, the contradictions here are merely apparent. The upshot is that the only way in which a non-existent thing can 'move' is by passing into existence. This can be equally well described as 'coming to be' what it was not before (namely, existent), or as passing from the state of non-existence to the state of existence. All these statements about motion, becoming, and change, are intelligible and valid as applied to a non-existent thing. They are extraordinarily lucid and subtle.

The whole section involves a re-assertion that there is such a thing as sheer coming into existence, not to be confused with any other sort of change. Parmenides' denial of this sheer becoming had altered the course of physical speculation. All the later schools had accepted the denial, and substituted for coming into existence the rearrangement in space of ultimately real things which could never begin or cease to exist. Plato will not admit the principle. He asserts sheer becoming, and thereby bequeaths a problem which Aristotle was driven to solve by the doctrine of potential existence.

The Hypothesis as a whole is a brilliant refutation of the Eleatic dogma that nothing can be said about 'what is not'. Even if 'what is not' means 'what does not exist', Plato successfully asserts that many true statements can be made about the non-existent. When he observes that in speaking of a non-existent thing we *know* what we are speaking of, he uses against Parmenides his own principle, that whatever can be thought must be. He also refutes the dogma that coming into existence is impossible because there can *be* nothing that could come into existence.[1] It is hard to believe that anyone who has followed these arguments and appreciated their subtlety can continue to regard the dialectical exercise as a tissue of sophisms. The notion that this Hypothesis is full of fallacies is due to the preconception that 'the One' here considered must be the same as 'the One' of Hyp. II, and that this is the world of Ideas. The upshot is supposed to be that Ideas 'partake of not-being' in the sense 'otherness' as defined in the *Sophist*.[2] On this assumption nearly all the arguments become, not merely fallacious, but unintelligible or meaningless. The inference should be that the assumption itself is false.

[1] Diès, p. 37, *La présente hypothèse . . . est la réponse du Parménide de Platon à la solennelle interdiction prononcée par le Parménide historique : 'non, tu ne contraindras point les non-êtres à être'*.

[2] This view is partly due to a misunderstanding of ἕτερόν τι λέγοι τὸ μὴ ὄν and ἕτερον λέγει τῶν ἄλλων τὸ μὴ ὄν at 160C.

The confusion of the non-existent entity of this Hypothesis with that ‘ what-is-not ’ (τὸ μὴ ὄν) which is identified with ‘ the Different ’ in the *Sophist* (257B ff.) was already made by Grote. This is clearly a mistake, for in that context of the *Sophist* ‘ that which is not ’ is expressly said to mean ‘ not something contrary to what exists but only something different ’. The different is simply ‘ the not so-and-so ’—anything that exists but is defined negatively as different from something else. The whole point there is that the negatively defined existent has just as much claim to existence as the positively defined. If we try to interpret the present Hypothesis in that sense, the whole of the last section on becoming will be unintelligible. Other critics who (like myself) have written about the *Sophist* without first making a close study of these negative Hypotheses have overlooked the fact that most of the chief distinctions between the meanings of ‘ is ’ and of ‘ is not ’ are already drawn here. With astonishing lucidity, Plato has distinguished existence from the being which belongs to any entity that can be thought or spoken of. And in the following Hypotheses he makes his points still clearer by contrasting with the Non-existent Entity of Hyp. V other meanings of a ‘ One which is not ’.

HYPOTHESIS VI

In this Hypothesis Plato reinforces the conclusions reached in the last. We were there concerned with a ‘ one thing ’ that does not exist but has that ‘ being ’ which belongs to the subject of any true statement. We now deprive the ‘ One ’ even of that barest kind of being, and define ‘ a thing which is not ’ as meaning no longer a non-existent entity, but a nonentity. Parmenides had confused these two ideas, assuming that anything that does not exist must be a mere blank of nothingness. Plato corrects him by taking the two ideas separately and showing that they lead to different conclusions.

163B–C. *If ‘ the One is not ’ means that the One has no sort of being, the One will be a nonentity*

The first paragraph lays down very clearly that the subject for consideration is that which simply ‘ is not ’ in any sense whatsoever—nonentity.

163B. Once more, then, let us go back to our starting-point to see whether we shall reach results different from these.

C. Our question is : If a One is not, what will follow concerning it ?

The words ‘ is not ’ mean simply the absence of being

163c. from anything that we say is not. We do not mean that the thing in a sense is not, though in another sense it is.[1] The words mean without any qualification that the thing which is not in no sense or manner is, and does not possess being in any way. So what is not cannot exist or have being in any sense or manner.

163d–e. *A Nonentity cannot begin or cease to exist or change in any way*

At the end of the last Hypothesis it was shown that a non-existent entity, though it cannot move in space or change in character, can pass from non-existence to existence, just because there is something to exist at one time and not at another. But now there is nothing; and for nonentity no change of any sort is possible. We cannot even say of it that it does not change (is at rest), because there is nothing to serve as subject even for this negative statement.

163d. And 'coming to be' and 'ceasing to be' mean, as we said,[2] nothing else than acquiring being and losing it. But a thing which has nothing at all to do with being cannot acquire or lose it. So the One, since it 'is' in no sense whatever, must not possess being or lose or acquire it in any way. Therefore the One which is not, not possessing being in any sense, neither ceases to be nor comes to be.

'Coming to be' here includes both coming into existence (as at 156a) and becoming something that the subject was not before (as just above, at 163a). From the latter sense it is inferred in the next paragraph that a nonentity cannot 'change in character' or 'move'. Both terms again are meant in the wide sense they bore in the last Hypothesis: a thing 'changes in character' when it becomes 'unlike', i.e. when any statement becomes true of it that was not true before. And if that is impossible, it cannot 'move', i.e. suffer any sort of transition or change. Nor can it 'rest'; for it has no character and it can never be in any place or condition; whereas the non-existent entity of Hyp. V could be said to be 'at rest', since it had a character that remained constant.

163e. Consequently, neither does it change in character in any way; for if it suffered such change it would be coming to be or ceasing to be.

And if it does not change in character, it cannot be in

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[1] This is exactly what we did mean in the last Hypothesis, 161e, *οὐσίας γε δεῖ αὐτὸ μετέχειν πῃ.*

[2] At 156a (in the Corollary to Hyp. II).

163E. motion. On the other hand, we cannot speak of what is nowhere at all as being at rest either; for what is at rest must always be in something (some place or condition) that is the same. Thus that which is not must not be said ever to be in motion or at rest.

163E–164A. *A Nonentity cannot have any character*

Once more the conclusions here are in contrast with those of the previous Hypothesis, where we saw that a non-existent entity can be said to *have* likeness and unlikeness, inequality and equality, though we were not allowed to say that it *is* like, etc. We now find that nonentity cannot even *have* any character, because there is simply no entity to have it.

163E. Further, nothing that is can belong to it; to have a
164. character that *is*[1] would imply that it had being. Therefore it has not greatness or smallness or equality. Nor can it have likeness to, or difference of character from, either itself or the Others.

And if nothing can stand in relation to it, the Others cannot be anything *to* it: they cannot be either like it or unlike, the same or different.

The opening statement (literally, 'nothing that is can be *to* it') covers both the statements, (1) that no character can *belong to* nonentity, and (2) that nothing else can have any character *in relation to* it—be like *to* it, equal *to* it, and so on. Contrast the non-existent entity of the last Hypothesis, of which we could say that the Others are unlike or unequal to it, though we might not say that it *is* unlike or unequal to them. It is, of course, equally impossible that anything should stand to nonentity in any relation expressed by the genitive: so we shall proceed to say that there can be no knowledge *of* it.

164A–B. *A Nonentity cannot be specified as distinct from other things, or stand in any relation to them, or exist at any time, or be the object of any cognition or the subject of discourse*

In Hyp. V the non-existent entity was something that could be 'known' or recognised as something distinct from other things (160C), and other things could stand to it in various relations. All this must be denied of nonentity.

164A. Again, we cannot attribute to 'what is not' anything that is: we cannot say it is 'something' or 'this thing';

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[1] ὄντος, which Burnet brackets, is retained by Diès.

164A. or that it is so-and-so 'of this' or 'of another' or 'to another'; or that it is at any time, past, present or future;
B. or that there is anything '*of* it'[1]—any knowledge or opinion, or perception *of* it—or that it *has* anything, even a name, so as to be the subject of discourse.

Thus a One which is not cannot have any character whatsoever.

Such are the consequences of giving to the words 'is not' the fullest possible sense. They are the same as the consequences of giving 'one' the fullest possible sense, as we did in Hyp. I; for that led to the assertion that such a 'One' could not have being in any sense; we could not even say of it that it 'is one', and it could not be the object of any sort of cognition or even be named. As against Parmenides, Hyp. I and VI taken together demonstrate that his One, which was to be one in every sense to the exclusion of all plurality and therefore even of 'being', is in exactly the same case as that absolute Not-being which he rightly described as not to be so much as named or thought or spoken of. In the *Sophist* (237B ff.) the Eleatic Stranger confirms that description of nonentity or the totally unreal (τὸ μηδαμῶς ὄν), in agreement with the present Hypothesis. But there, as here, it is pointed out that 'what is not' has other senses than nonentity.

HYPOTHESIS VII

The remaining two Hypotheses are concerned with the consequences for the Others of the negative supposition that 'there is no One'. The emphasis now falls, once more, on the term 'one'. In the two previous Hypotheses it fell on the words 'is not': we took the notion of a 'One' and considered what would be true of it, if we supposed (1) that it was one entity but non-existent, and (2) that it was not even an entity. We now turn to 'things other than the One', and consider whether they can have any sort of being, if we suppose that there is no 'One'. With this shift of emphasis the meaning of the negative supposition is necessarily changed. We are no longer supposing the absence of existence from something which has unity or the total absence even of 'being'; we are supposing the absence of unity from some other element which might possess unity, but is to be conceived as not possessing it. It is essential to realise that the negative supposition here is not the same as in Hyp. V or Hyp. VI.

[1] τὸ ἐκείνου ἢ τὸ ἐκείνῳ at the beginning of the sentence may be taken specially with the denial of cognition *of* it and of a name belonging *to* it, as in the parallel passage, 142A.

There are two ways in which we can suppose the absence of unity. (1) We can understand ' if there is no One ' as meaning ' suppose that there exists nothing that can be called " one thing " (ἕν) '. We can then inquire whether there is anything that, without being ' one thing ' can nevertheless have some sort of existence. This is the question raised in the present Hypothesis. Or (2) we can understand the same supposition to mean : ' suppose that no one thing has any sort of being ', taking ' one thing ' as equivalent to ' an entity '. If there is no such thing as ' an entity ', then there is not only no ' One ' but no ' Others ' ; in fact, there is nothing at all ; and that will be the conclusion of Hyp. VIII. The purpose of these two remaining Hypotheses is to distinguish these two meanings of the negative supposition. The second leads to purely negative results, and so corresponds to Hyp. VI, which has just led us to deny everything of nonentity. That which has no sort of unity will there be as pure a negation as that which has no sort of being. But we are first to consider the less drastic sense in which the absence of unity can be conceived. We are to suppose that ' there exists nothing that can be called " one thing " ', and yet that there are ' Others ' which, though not entitled to be called ' one-things ', are not simply nothing at all. We shall make certain positive assertions about these Others.

What, then, is meant by ' one thing ', whose existence our supposition denies ? The description here given of the Others makes this clear. The Others are evidently those unlimited elements in things which have already come before us in Hyp. III (158B ff.) We were there told that the addition of unity to these unlimited elements gives them a limit towards one another. The combination of unity or limit with an unlimited produces one limited thing (πεπερασμένον). This is what is meant by a ' one thing ' such as we are now to suppose does not exist, because the factor of unity is absent. Also, when we say that a ' one thing ' does not exist, this does not mean, as in Hyp. V, that we are considering one thing as non-existent in contrast with other ones which may exist. The Others now are not other *ones*. The supposition must mean that nothing exists that can be called ' one thing '. No one limited thing is anywhere to be found. Unity is absent ; and we are considering, in isolation from it, that second element of ' unlimited multitude ' which could ' come to acquire unity ' but has not acquired it, described in Hyp. III. The same supposition can also be expressed by saying that unity in the sense of ' limit ' does not exist.

164B–C. *If ' there is no One ' means ' nothing that is " one thing " exists ', then the Others can only be other than each other*

We start with a definition of the Others, which distinguishes them from the Others as defined at the beginning of Hyp. III (157B ff). In that positive Hypothesis unity was at first supposed to be present and to act as limit. Consequently, the Others were a limited plurality of ones, which were not some one thing, but were other ones. Now we are told that ' other ' does not mean ' other than some one thing ', for there is no ' one thing '. Yet they are ' other ' ; so they can only be other than each other. There is otherness, diversity, difference ; but it is not the difference that subsists between two distinct things, each of which is one and limited.

> 164B. Let us go on, then, to the question : If there is no One, what must be true of the Others ?
>
> Obviously it must be true that they are others ; if it were not, we could not be talking about ' the Others '. And if we are talking about the Others, things that are Others must be different ; ' other ' and ' different ' are two C. names for the same thing. Moreover, we speak of a thing as different from, or other than, something that is different from, or other than, it. So the Others must have something to be ' other than '. What can this something be ? Not the One, for there is no One. They must, then, be other than each other ; that is the only possibility left, if they are not to be other than nothing.

What is meant by ' other than each other ' (ἄλλα ἀλλήλων) ? The unlimited element is always a dyad, such as the great-and-small. Thus in a way it has two component contraries, which are other than each other. Hotter and colder form an unlimited continuum which is not homogeneous. In the absence of the element of unity, which would fix a limit somewhere in the unlimited range, we can only say that ' hotter ' is hotter than ' colder ', ' greater ' is greater than ' smaller ', and so on. It is in such terms that the ' unlimiteds ' of *Philebus* 24 are described.

164C–D. *The Others will differ from each other as masses unlimited in multitude*

If we try to imagine a continuum, such as the great-and-small, without any external or internal limit, there will be no definite degrees of quantity to serve as measures or units. And there will be no fixed point (called ' the equal ') with greater on one side of it and smaller on the other.[1] The continuum is infinitely divisible; and if you try to conceive a smallest part of it, the duality of great-and-small will always be found within that part, so that what you thought was one will still be many. And since there is no unit, there is no number, number being a definite plurality of units. There is nothing but indefinite 'multitudes' (πλήθη) not measured by any unit and without any definite external limits. The word 'mass' or 'bulk' (ὄγκος) is also used, for lack of any better term to describe quantitativeness where there is no definite quantity.

164C. Accordingly they must differ from each other as multitudes from multitudes; they cannot differ as one thing from another one, since there is no One (one thing). Rather,
D. it seems, each mass of them must be without limit of multitude[2]; if you take what seems to be a minimum, suddenly, as might happen in a dream, what you took to be one appears many, and what had seemed to be least appears enormous in comparison with the small change for it. It is, then, as masses of this sort that the Others are other than each other, if they are other without there being any One.

164D–E. *Such masses will present an appearance of unity and number*

When we imagine such continua, although we cannot say that we have before our minds two different things, each of which is 'one thing' clearly marked off from the other one, nevertheless there is diversity: there is the difference of greater from smaller, of hotter from colder, and so on. There will thus 'appear' to be many things, each of which appears to be one, though this oneness dissolves on closer inspection into multitude—a multitude which cannot be counted or numbered, because no unit is discoverable.

164D. And there will be many such masses, each appearing to be one, but not really being so, if there is to be no One. So they will seem to have number, since each seems to be
E. one, and they are many. And some among them will appear even, some odd, but falsely, if there is to be no One.

In what sense are there 'many such masses'? If we consider a continuum like hotter-and-colder, we may say that hotter lies in one direction, colder in the opposite direction. If we can 'take' anywhere what appears to us to be one 'mass' (though really it has no definite limits of quantity), we can also take another mass lying more towards 'hotter', and we might imagine we had got hold of something twice or three times as hot. We should then have the illusion of even or odd number.

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[1] Cf. 161D.

[2] Cf. the description of the Others (in the same sense) as πλήθει ἄπειρα in Hyp. III, 158B. As before, the expression is purely negative; not 'infinitely numerous', since there is no number.

164E–165A. *There will be an appearance of greatness, smallness, and equality*

We pass from the appearance of number to the appearance of magnitude. We could not obtain number by adding unit to unit or by multiplication. Neither can we arrive, by way of division, at an indivisible or 'least' part to serve as unit. The statements here echo the account of the unlimited element taken in abstraction from unity at 158C.

164E. Further, they will seem, as we are saying, to have a smallest in them; but this smallest appears as a 'many',
165. which is great in comparison with the smallness of each of that many. Also each mass will be imagined equal to the many smalls; for it could not pass in appearance from larger to smaller without seeming to reach the intermediate stage, which will be a semblance of equality.[1]

165A–C. *There will be an appearance of limitedness and of unlimitedness*

In the absence of unity, any mass we take will have no external boundaries or internal divisions. It will be unlimited in extent as well as infinitely divisible.

165A. Also each mass will appear as having a limit in relation to another mass. With respect to itself, it has neither beginning nor end nor middle; since whenever you fix your thought on any part of them and take that as beginning or middle or end, another beginning always appears
B. before the beginning, another end left over after the end, and within the middle others that are more in the middle and smaller, because you cannot apprehend any of them as a 'one', since there is no One. So anything there is, upon which you may fix your thought, must be frittered away in subdivision; anything we may take will always be a mass without a One. To a dim and distant view such
C. a thing must appear one, but to closer and keener inspection

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[1] Cf. 161D on 'equality' as standing between greatness and smallness.

165C. each must appear without limit of multitude, being destitute of that One which does not exist.

Thus, if there is no One, but only things other than the One, each of these Others must appear both unlimited in multitude and limited, both one and many.

165C–E. *There will be an appearance of likeness and of unlikeness and of all the other contraries*

Since unity is not performing its function as limit, there can be no single definite characters for the Others to possess. So there can be at most only a perpetually dissolving appearance of all the remaining characters.

165C. Also, they will appear both like and unlike. As with
scene-paintings, to the distant spectator all will appear as
one thing, and seem to have the same character and so to
D. be alike ; but if you approach nearer, they seem many and
different and this semblance of difference will make them
seem different in character and unlike one another. Thus
these masses must appear both like and unlike themselves
and each other.

Moreover, they must appear both the same and different
from one another ; both in contact and apart from one
another ; both in every sort of motion and at rest in
every respect ; both coming to be and ceasing to be and
doing neither ; and so on with all characters of that sort,
which could easily be enumerated. All this follows, if there
E. are many, but no One.

This Hypothesis evidently describes the unlimited continuous element, as it will appear if we attempt to conceive (*λαμβάνειν τῇ διανοίᾳ*, 165A) or imagine it in abstraction from that element of unity or limit which must be added before any ' one thing ' can exist. It is the great-and-small or the indefinite dyad ; in number, the more-and-fewer ; in magnitude, the larger-and-smaller, and so on. We have already had this element before us, not only in Hyp. III (158B ff.) where it was first explicitly mentioned, but also in Hyp. IV, where Unity was supposed to exist but to remain completely ' apart ', not communicating its character to anything. The result was that there was no one definite character that could be attributed to the Others. They were not altogether denied existence ; but Unity might as well not have existed, so far as the Others were concerned. So the situation was the same for them as in the present Hypothesis, where no ' one thing ' exists because

Unity is altogether absent. What is here contributed is a further positive description of the unlimited factor.

There is no explicit reference to sensible qualities, like hotter-and-colder or higher-and-lower in sound ; but these are described in similar terms in the *Philebus* and we shall probably be right to include them. If so, our passage may be illustrated from the *Timaeus* (52D),[1] where an analogous effort is made to visualise space and its contents before the Demiurge introduces the limiting factor which 'gives them a distinct configuration by means of (geometrical) shapes and numbers'. In that chaotic condition space is not empty, but filled with qualities or 'powers' (*δυνάμεις*), such as hot-and-cold, moist-and-dry, in disorderly motion, with no principle of measure or proportion. The whole account seems to imply that these opposite qualities or powers are not to be disposed of as mere 'subjective' affections of our sense-organs, whose only external cause would be portions of empty space partitioned off by the plane surfaces bounding the figures of the four simple bodies. They are conceived as filling all space 'before' (as well as after) the introduction of number and geometrical shape ; that is to say, in abstraction from these limiting factors, for the unlimited never actually exists apart from limit. So in our passage no 'one thing' will exist until the unlimited 'masses' are combined with unity. But the unlimited is not nonentity. Language compels us to use singular and plural words, both of which are inappropriate if there is no One and no plurality of ones ; but, if we allow for that, it is possible to conceive and imperfectly describe the unlimited element in abstraction.

There is here another criticism of Parmenides, who insisted that only his One Being was conceivable and could be named or truly described. The opposites of sensible quality were dismissed as an appearance which was utterly false and groundless, because it contradicted the attributes of the only real being. Plato's intention is to deny that these unlimited factors are entirely inconceivable and indescribable. They are not nonentity, but that something which *has* unity when formed into 'one limited thing'. In the *Timaeus* this something figures as those 'motions and powers' which remain when we have abstracted number and geometrical shape from sensible bodies.

Further, this account of the unlimited factor brings out clearly the contrast between Plato's view of matter and that of the Atomists. Leucippus and Democritus had adopted and modified the original Pythagorean theory that bodies are built up of indivisible units of very small magnitude. The word *ὄγκος*, here used by Plato for

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[1] See F. M. Cornford, *Plato's Cosmology*, pp. 197 ff.

‘mass’, is used of Democritus’ atom and had perhaps been the name for the point-atoms of the Pythagoreans.[1] Plato rejects the notion that the content bounded by the atom’s shape can be an indivisible lump of unchanging ‘being’ with no perceptible quality except impenetrable hardness. He accepts the alternative of infinite divisibility. Sensible qualities are not to be explained away as mere ‘affections’ of our sense-organs; they reside in matter as ‘powers’ which can produce such affections. So far from being unchangeable, matter is in a perpetual flux; indeed the *Theaetetus* (156C) speaks of the external causes of perception as actually being ‘slow motions without change of place’.

This Hypothesis can also be taken as a refutation of Zeno’s argument that a plurality of things cannot exist, because a plurality is made up of units, and the conception of a unit is self-contradictory; so there is no unit or ‘one-thing’ (ἕν). The argument was no doubt directed against the point-unit-atom of the Pythagoreans.[2] Plato replies that, even if there were no ‘one thing’ in existence, plurality will still be conceivable as unlimited multitude without a One.

HYPOTHESIS VIII

The final Hypothesis is related to its predecessor in the same way that Hyp. VI (on nonentity) was related to Hyp. V (on the non-existent entity). When he had shown that much can be said about a ‘one entity that does not exist’, Plato reinforced his point by depriving this non-existent entity of the last shred of ‘being’, so that it became nonentity, about which nothing can be said. Similarly here, Plato has described in the previous Hypothesis the unlimited element in any ‘one thing’ imagined in abstraction from the unity or limit without which it cannot in fact exist. But now we are to suppose the total abolition of any and every ‘one-thing’; and that means the total abolition of both its elements. Nothing whatever is left. The meaning of the negative supposition is accordingly altered. In the previous Hypothesis it meant: ‘If no “one thing” (i.e. no one limited thing) exists’. It now means: ‘If there is no such thing as “one entity” (or *an* entity)’. This emerges at the conclusion of the Hypothesis.

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[1] D. L., IX, 44, *λείων καὶ περιφερῶν ὄγκων.* Ar., *Phys.* 239*b*, 33 (Zeno’s Stadium argument), *τῶν ἐν τῷ σταδίῳ κινουμένων ἐξ ἐναντίας ἴσων ὄγκων παρ’ ἴσους.*

[2] Eudemus ap. Simplic., *Phys.* 99, 7 ff., ‘Zeno abolished the One (τὸ ἕν), for by “the One” he means the point’. ‘He tried to show that things cannot be many, because there is no One among things that exist, and plurality is a plurality of units (πλῆθος ἑνάδων).’

165E. *If ‘ there is no One ’ means ‘ there is no such thing as an entity ’, the Others will be neither one nor many, but nothing*

The supposition now being that there is no such thing as ‘ one entity ’ or ‘ an entity ’, that means that there is nothing whatever having that ‘ being ’ which must belong to the subject of any significant statement. The consequences for the Others can be quickly drawn. The first is that the so-called Others cannot be either one entity or a number of one-entities. They can no longer be even what they were in the previous Hypothesis, unlimited multitudes ; for by an effort of abstraction we could, at least imperfectly, conceive such multitudes and make certain statements about them. To that extent they had being and, in combination with limit, they would actually exist. But now this last shred of being is withdrawn and there remains nothing at all. ‘ No thing ’ (οὐδέν) now means, not ‘ something which is *not one-thing* but has a sort of being ’, but ‘ nonentity ’.

165E. Now let us go back to the beginning for the last time and ask : If there is no One, but only things other than one, what must follow ?

The Others will not be one ; but neither will they be many. For if they are to be many, there must be a one among them ; since, if none of them is one thing (ἕν), they will all be no-thing (οὐδέν), and so not many either. But there is no one among them ; so the Others are neither one nor many.

Plato here adopts the form of Zeno’s argument that things cannot be many, because ‘ there is no one among them ’, and a many must be a plurality of ones.[1] But whereas the ‘ one ’ that Zeno attacked was the unit-point-atom of the Pythagoreans, Plato is assuming the total absence of anything that can be called ‘ a thing ’ or ‘ an entity ’ ; and this entails the abolition not only of a plurality of ‘ one-things ’, but also of the indefinite multitude of the last Hypothesis.

165E–166C. *The Others cannot even appear one or many, or as having any character. There is nothing that has any being whatsoever*

If there is no such thing as an entity, there is nothing *of* which there could be an appearance or a notion in our minds. So the

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[1] Eudemus ap. Simplic., *Phys.* 99, 7 ff. Zeno tried to show ὅτι μὴ οἷόν τε τὰ ὄντα πολλὰ εἶναι τῷ μηδὲν εἶναι ἐν τοῖς οὖσιν ἕν. Cf. 165E, 5, οὐδὲ μὴν πολλά γε· ἐν γὰρ πολλοῖς οὖσιν ἐνείη ἂν καὶ ἕν.

Others cannot have an appearance of being one entity or many entities, or of having any character ; for any character must be an entity, and there is no such thing.

166A. Nor do they appear one or many. For the Others cannot in
any sense or manner have any connection with a nonentity,
nor can any element of a nonentity be present to any of them,
since a nonentity has no elements. Consequently neither
can any appearance or seeming (*δόξα*) of that which has
no being be found in the Others, nor can any notion what-
soever of what has no being be entertained as applied to
the Others.[1] So if there is no One, none of the Others can
B. be so much as imagined to be one, nor yet to be many,
for you cannot imagine many without a One.

Therefore, if there is no One, the Others neither are, nor can be imagined to be, one or many.

The statement ' you cannot imagine a many without a One ' appears to contradict the previous Hypothesis, where we were attempting to imagine multitude without unity. But the statement refers to the characters (such as ' one ', ' many '), a semblance of which appeared in our imagination to belong to the unlimited in abstraction. These characters were thought of as in fact having being and so as each ' a One ' (one entity), though they did not really belong to the unlimited factor in isolation. But now these characters themselves are abolished, and there can be no seeming or appearance of them in anything and no imagination of them in our minds.

166B. Nor yet, if there is no One, can the Others be or appear
like or unlike, or the same or different, or in contact or
apart, and so on with all the other characters which we have
just been saying they appear to have.
C. Thus, in sum, we may conclude : If there is no One, there
is nothing at all.

As before, the intention of the last pair of Hypotheses is to point out an ambiguity which Parmenides had failed to see. What is not ' one thing ' or ' a thing ' may be nonentity, and then we shall accept his doctrine that nothing can be said about it (Hyp. VIII). But what is not the one thing or One Being he spoke of may be an element which in itself lacks unity but is combined with the factor of unity to make up the One Being (Hyp. VII). And when he described his One Being as a limited sphere extended in space, he was in fact assuming that it did contain, besides its unity or limit, the great-and-small or the unlimited. It was because Parmenides refused to recognise this unlimited factor and confused it with absolute not-being or the totally unreal (τὸ μηδαμῶς ὄν), that he was unable to provide any basis for a world of appearance between the perfectly real and intelligible and blank nonentity. But you cannot get rid of appearances merely by stigmatising them as false or illusory ; the appearances remain and there must be something which yields the appearances—something which may be admitted to be not the perfectly real object of rational thought and knowledge, but none the less must have some sort of being, and cannot be mere nothingness.

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[1] ἐπὶ τῶν ἄλλων. Waddell and Diès keep the MS. ὑπὸ : *conçue par les Autres* (Diès). But there is not the faintest suggestion elsewhere that the Others could possibly conceive anything. Prof. Taylor kindly informs me that the word ' of ' (not ' by ') has been omitted by a misprint after ' entertained ', in his version.

The *Theaetetus* (157E ff.) will argue that even the delusions of sense, dream-images, and the hallucinations of insanity must not be simply ignored : we cannot deny that the dreamer or the madman has just that experience that he does have. The *Sophist* (236B) maintains the necessity of recognising, between Parmenides' perfectly real Being and nonentity a world of *eidola* having some sort of existence (ὄν πως), and provides a theory which rescues false belief and judgment from the Eleatic charge that false belief can have no object, and false judgment no meaning, because there is nothing for them to refer to (259D ff.). In the *Timaeus* the images of reality that appear in the physical universe are provided with a ' receptacle ', space, an ultimate given factor, within which the unlimited element appears as a chaos of disorderly ' motions and powers '. This element may be irrational ; but Parmenides was not entitled to deny it any sort of existence on the ground that its existence cannot be deduced from the conception of a One Being.

166C. *Ostensible conclusion of all the Hypotheses*

166C. To this we may add the conclusion : it seems that, whether there is or is not a One, both that One and the Others alike are and are not, and appear and do not appear to be, all manner of things in all manner of ways, with respect to themselves and to one another.

That this conclusion is only ostensible will now be clear to any reader who accepts the principles of the foregoing interpretation as even approximately correct, whatever errors in detail may have crept in. It is a challenge to the student to discover for himself the ambiguities of the Hypotheses and any fallacies there may be in the form of the deductions. This is no new device in Plato. In a whole series of the early dialogues—*Laches*, *Charmides*, *Euthyphro*, *Lysis*—the conclusion that is meant to be accepted is skilfully masked, so that the reader may be forced to discover it by careful study. It is unobtrusively indicated some way before the end of the conversation, and followed by an argument which seems to throw doubt upon it, though this impression proves false if you think out what the argument really proves. The ostensible conclusion is a confession of failure. This device occurs again in the *Meno*, where the Socratic definition of Virtue as knowledge is actually reached about half-way through (89A), and yet the conversation ends with the remark that we shall never be sure how virtue is acquired until we have found out what virtue is. The concealment is so cunningly effected that many readers of the *Meno* do not realise that we have found out what virtue is, and that by reflection on the difference between teaching in the ordinary sense and recollection we can infer how it is acquired. In all these cases Plato's object is to compel the reader to think, and think hard, for himself, instead of presenting him with conclusions which he might indolently accept without making them his own. If he does not make this effort, he will at least have gained the consciousness of his own ignorance.

The dialogue ends here abruptly. It would obviously be quite impossible for Parmenides, Zeno, and Socrates to continue their conversation and discuss the relevancy of this ocean of arguments to the questions raised at the beginning. The student must think out these matters for himself. If he does so, he will discover much that throws light on the later dialogues: the *Theaetetus*, the *Sophist* and *Statesman*, and the *Philebus*. The fruits of the dialectical exercise on the theme that the terms ' being ' and ' one ' are used in many different senses are to be found on many a page of Aristotle.

The commentary may have drawn too much attention to this matter of ambiguous terms. The modern distinction between logic and metaphysics can hardly be said to have existed for Plato. It must not be overlooked that, particularly in Hyp. II, he has restored, in a modified form, the Pythagorean ' evolution ' from the One, through the union of Limit and Unlimited in numbers and geometrical figures, to sensible things with their limiting form and unlimited matter. He has thus laid down, in outline, the foundations of the ontology which underlies all the later dialogues. Also, he has indicated what he will, or what he will not, accept from his great forerunner, Parmenides.

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